DOCUMENT RESUME

ED 111 961 CE 004 703

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TITLE	Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experience of Male Youth. Volume Five.
INSTITUTION	Ohio State Univ., Columbus. Center for Human Resource Research.
SPONS AGENCY	Manpower Administration (DOL), Washington, D.C.
PUB DATE	Apr 75
NOTE	91p.; Vol. 1 of the study is available as MP 000 718 (ERIC Manpower Research Studies); Vols. 2, 3, and 4 are available as ED 047 104, ED 054 336, and ED 074 280
EDRS PRICE	MF-$0.76 HC-$4.43 Plus Postage
DESCRIPTORS	Blue Collar Occupations; Caucasians; *Collective Bargaining; Comparative Analysis; Educational Background; *Employment Experience; Employment Statistics; Labor Market; Labor Unions; *Longitudinal Studies; *Males; Negroes; Participant Characteristics; *Racial Differences; Tables (Data); Unemployment; Union Members; Wages; Young Adults; Youth Employment

ABSTRACT

This study deals with the impact of collective bargaining coverage on the 1969-70 labor market experience of young men in blue collar jobs. Specifically examined is the impact of collective bargaining on five dimensions of the labor market experience: (1) hourly rate of pay, (2) hours worked per week, (3) susceptibility to unemployment, (4) duration of unemployment, and (5) growth in hourly earnings. Additionally, the relationship between collective bargaining coverage and racial differentials in these dimensions is explored. Sections deal with: gross union-nonunion differences in labor market experience; union-nonunion differences in personal (including educational background) and situational characteristics; net effects of collective bargaining on earnings and labor market experience; and comparison of racial differences in the union and nonunion sectors. Data on the five dimensions are presented according to major occupation group and race. Two major conclusions are: (1) collective bargaining coverage has considerable net impact on earnings of all workers studied, and (2) unionized blacks experience less unemployment than nonunionized blacks. Appended are: tables showing regression results; a 33-item bibliography; a glossary; an account of sample attrition; a description of sampling, interviewing, and estimating procedures; and the 22-page Census Bureau survey instrument used for interviews in 1970. (MS)

ED111961

CAREER THRESHOLDS:

A longitudinal study of the educational and labor market experience of male youth

Paul Andrisani
Andrew I. Kohen

VOLUME FIVE
April 1975

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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CE 004 703

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This volume is an interim report on a longitudinal study of the educational and labor market experiences of young men. In early 1965, the Center for Human Resource Research, under a contract with the U.S. Department of Labor, began the planning of longitudinal studies of the labor market experience of four groups in the United States population: men 45 to 59 years of age, women 30 to 44, and young men and women 14 to 24. For each of these population groups, a national probability sample of the noninstitutionalized civilian population was drawn by the U.S. Bureau of the Census. These four groups were selected for study because of the special labor market problems that each faces. In the case of the young men, for example, the problems are those revolving around the process of occupational choice and include both the preparation for work and the frequently difficult period of accommodation to the labor market. As of this writing, the young men have been surveyed annually from 1966 through 1971 and again in 1973. (For information on the sampling design see Appendix E.)

While the more-or-less unique problems of each of the subject groups to some extent dictate separate orientations for the four studies, there is, nevertheless, a general conceptual framework and a general set of objectives common to all of them. Each of the studies views the experience and behavior of individuals in the labor market as deriving from interactions between the characteristics of the environment and a variety of economic, social, demographic and attitudinal characteristics of the individual. Each study seeks to identify and measure those characteristics that appear to be important in explaining variations in several facets of labor market experience: labor force participation, unemployment experience, earnings, and various types of labor mobility. Knowledge of this kind is expected to make an important contribution to our understanding of the way in which labor markets operate and thus to be useful for the development and implementation of appropriate labor market policies.

This report represents a significant departure from the earlier volumes in the series on young men,[1] each of which contained analyses

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[1]Herbert S. Parnes, Robert C. Miljus, Ruth A. Spitz and Associates, Career Thresholds: A longitudinal study of the educational and labor market experiences of male youth, vol. 1, U.S. Department of Labor, Manpower Research Monograph no. 16 (Washington: U.S. Government Printing Office, 1970); Frederick A. Zeller, John R. Shea, Andrew I. Kohen, and Jack A. Meyer, Career Thresholds, vol. 2, U.S. Department of

of several topics using tabular data exclusively. In contrast, this report relies very heavily on multivariate statistical analysis to explore a rather narrowly defined problem for only a subset of the larger cohort. More specifically, the focus is the impact of collective bargaining coverage on the 1969-1970 labor market experiences of young men working in blue collar jobs. In addition to increasing our understanding of the labor market behavior of young adult workers, the findings of the study are relevant to the continuing research on the impact of unionization on the American economy.

Both the overall study and this report are products of the joint effort of a great many persons, not all of whom are even known to us. The research staff of the Center has enjoyed the continuous expert and friendly collaboration of personnel of the Bureau of the Census, which, under a separate contract with the Department of Labor, is responsible for developing the samples, conducting all of the interviews, and processing the "raw" data. We are indebted to Earle Gerson, Chief of the Demographic Surveys Division, and to his predecessor, Daniel Levine; to Robert Mangold, Chief of the Longitudinal Surveys Branch; and to Dorothy Koger, our principal point of contact with the Bureau. We also wish to acknowledge our indebtedness to Alvin Etzler, James Johnson, and the staff of the Field Division who were responsible for collecting the data; to David Lipscomb, Eleanor Brown and their staff for editing and coding the interview schedule; and to Barbara Wilson and Kenneth Kaplan for computer preparation of the data tape.

The advice and counsel of many persons in the Department of Labor have been very helpful to us both in designing the study and in interpreting some of the findings. Without in any way implicating them in whatever deficiencies may remain in this report, we wish to acknowledge especially the continuous interest and support of Howard Rosen, Director of the Office of Manpower Research and Development of the Manpower Administration, and the valuable advice provided by Stuart Garfinkle, Jacob Schiffman and Ellen Sehgal, our principal contacts in the Office of Manpower Research and Development.

Herbert S. Parnes, Director of the NLS Project, provided us with his invariably valuable insights, reactions and guidance. Other colleagues who gave us the benefit of their reactions to an earlier version of the

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Labor, Manpower Research Monograph no. 16 (Washington: U.S. Government Printing Office, 1971); Andrew I. Kohen and Herbert S. Parnes, Career Thresholds, vol. 3, U.S. Department of Labor, Manpower Research Monograph no. 16 (Washington: U.S. Government Printing Office, 1971); Andrew I. Kohen and Paul Andrisani, Career Thresholds, vol. 4, U.S. Department of Labor, Manpower Research Monograph no. 16 (Washington: U.S. Government Printing Office, 1974).

manuscript are Francine Blau, Susan Breinich, John T. Grasso, Gilbert Nestel, Steven Sandell and Richard L. Shortlidge of the Center for Human Resource Research; and Stuart Garfinkle, Walter J. Gershenfeld, Richard D. Leone and J. Joseph Loewenberg of Temple University. The complex tasks of preparing variables and producing the statistical analyses we requested were ably accomplished by the following members of the Center's Data Processing Staff: Harvey Forstag, Gary Schoch, Darlene Shuman and Mark Smith. Patricia Shields, Constantine Karmas and Marc Parnes made noteworthy contributions in deciphering, recording and making additional calculations from the computer printout. Brenda Feder was primarily responsible for maintaining the necessary liaison with the Census Bureau. Finally, we wish to thank Kandy Bell for typing this and earlier versions of the manuscript.

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April 1975

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UNIONIZATION AND THE LABOR MARKET EXPERIENCES OF YOUNG BLUE COLLAR WORKERS

I INTRODUCTION

The effects of collective bargaining on the institution of work in America undoubtedly have been profound. Nonetheless, the magnitude of the effects of unionism on relative earnings is still subject to considerable controversy. In the classic study by H.G. Lewis (1963),[1] for example, the overall effect of unionism on earnings was estimated to be in the range of only 10 to 15 percent. Moreover, Lewis reported only occasional instances since the early 1930's in which the union advantage had been as high as 25 percent. The more contemporary evidence on the overall earnings effect of unionism is mixed, with some investigators presenting estimates higher than Lewis and some calculating the effect about the same or smaller than Lewis did.[2]

On the other hand, most recent studies that have utilized data which are more disaggregated than those available to Lewis have concluded that in many segments of the economy the effect of unionization on earnings is larger than Lewis estimated. For example, focusing on men in blue collar jobs Ashenfelter (1972, 1973), Boskin (1972), Ryscavage (1974) and Stafford (1968) estimated a net union-nonunion earnings differential ranging from 15 to 40 percent, depending on the particular year to which the data apply, the occupation-industry group, and the time unit for measuring earnings (i.e., hourly, weekly or annually). This study brings new evidence to bear on this subject by utilizing the National Longitudinal Surveys' sample of younger males (17 to 27 years old in 1969). In addition, by focusing upon this particular cohort, we seek to gain important insights concerning the accommodation of younger workers to the labor market in general and to the trade union movement in particular. In addressing these issues the analysis is restricted to blue collar wage and salary workers and is confined to the period between the 1969 and 1970 survey dates.

Specifically, this study examines the effects of collective bargaining on five dimensions of labor market experience: (1) hourly rate of pay;

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[1] All citations in the text and footnotes refer to items listed in the bibliography in Appendix B.

[2] For studies suggesting a larger overall effect of unions on earnings, see for example: Ashenfelter and Johnson (1969); Blinder (1971); Rosen (1970); and Throop (1968). For studies whose findings are more consistent with those of Lewis, see for example, Boskin (1972); Oaxaca (1973); Raimon and Stoikov (1969); Rosen (1969); and Weiss (1966).

(2) hours worked per week; (3) susceptibility to unemployment; (4) duration of unemployment; and (5) growth in hourly earnings. In contrast to all previous research with micro data, we are able to speak of the effect of collective bargaining rather than union membership on an individual worker's earnings, hours, etc. To the best of our knowledge, all other micro data sets merely indicate whether or not an individual is a member of a union or employee association. The effect of membership is an imperfect proxy for the effect of collective bargaining because some workers who are not union members are nonetheless covered by collectively bargained agreements.[3] Thus, for example, comparing the average wages of union members and nonmembers probably understates the impact of collective bargaining because the average of the nonmember group is artificially inflated by including the wages of covered nonmembers.

In addition, we examine the relationship between collective bargaining coverage and racial differentials in each of the measures of labor market experience. Throughout the analysis, we attempt to ascertain the effects of collective bargaining on "labor of a given relative quality."[4] Thus, for example, we define "relative earnings effects of unionism" as the extent to which unions raise the earnings of workers for whom they bargain above the earnings of comparable unorganized workers.

As previous studies have also noted, union-nonunion comparisons of wages or other dimensions of labor market experience almost always confound the effects of unionism with the effects of other forces that would have contributed to differentials in the absence of unions. According to Lewis, "the errors resulting from incomplete adjustment of the gross wage differences more frequently lead to overestimation than to underestimation of the effect of unionism."[5] It is therefore necessary to consider carefully and to control adequately for the influence of forces which may be correlated with both unionism and dimensions of earnings, and which may therefore lead to an overstatement of the effects of collective bargaining. Since the NLS data provide considerable detail in measuring differences in skills, abilities, and

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[3] To a lesser extent the imperfection results from some union members working in firms without collective bargaining agreements.

[4] Lewis (1962), p. 327.

[5] Ibid.

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situational characteristics, it is possible to control for a wide range of such differences between union and nonunion workers.

In the section which follows, "gross" union-nonunion[6] differences in several dimensions of labor market experience during the 1969-1970 period are highlighted by major occupation group and race. In addition to the five dimensions listed above, union-nonunion differences in total annual earnings, weeks worked, occupational status, overtime arrangements, job satisfaction, voluntary turnover, and incidence of layoff are also included. In Section III, we present and discuss data on union-nonunion differences in a wide range of personal and situational characteristics--some of which may act to confound the effects of unionism. Then, to capture the effects of collective bargaining on relative earnings, in Section IV we control for relevant personal and situational characteristics and focus directly on the remaining union-nonunion differences in each of the five dimensions of labor market experience noted above. In this process, we investigate the relationship between unionization and racial differentials by comparing racial differences in the union sector with racial differences in the nonunion sector. The study is concluded with a brief summary.

II GROSS UNION-NONUNION DIFFERENCES IN LABOR MARKET EXPERIENCE, 1969-1970

In examining the effects of unionism, the importance of focusing on labor of a given quality cannot be overemphasized, for there is considerable reason to suspect that unionized blue collar workers have different characteristics than their unorganized counterparts and, therefore, would earn more and have more favorable labor market experiences even in the absence of unionism. Nonetheless, it is useful to compare the labor market experience of the unionized with that of the unorganized within each race and major skill category. First, a comparison of "gross" union-nonunion differences in experience during the period of this study places the subsequent and more intensive analysis of earnings in clearer perspective. Second, it highlights some important aspects of the process whereby young men are accommodated to the labor market and the trade union movement. Third, it provides an overview of how young blue collar workers fared during the course of the economic downturn of the 1969-1970 period.

Before turning to this comparison, however, the distribution of the sample according to occupation, collective bargaining coverage,

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[6] With the exception of references to Table 1 below, we utilize the distinctions "union-nonunion" and "covered-noncovered" interchangeably for the sake of exposition. However, the reader is reminded that the latter is the accurate one.

union membership and race is presented in Table 1. Overall, slightly less than half of these young blue collar workers were employed in jobs in which their wages and working conditions were determined by collective bargaining agreements. For whites and blacks alike, operatives were more likely than craftsmen or laborers to be covered by such agreements. Of the covered workers, seven out of ten blacks and eight out of ten whites were members of the union or employee association which bargained on their behalf.[7]

That the 1969-1970 labor market experience of blue collar workers in this cohort differs markedly according to collective bargaining status is convincingly demonstrated by the data presented in Table 2. In particular, union-nonunion differences in earnings appear to be very substantial. Among craftsmen and laborers, for example, the differentials in average hourly earnings at both the 1969 and 1970 survey dates--and in total annual earnings during the 12-month interim--are particularly large. Although differences may not be attributable solely to the effects of unionism, it is interesting to note that in all cases the earnings differences are larger than the overall effect estimated by Lewis (1963) and within the range of estimates in more contemporary studies.[8]

The data also suggest, however, that the union hourly earnings advantage declined somewhat between 1969 and 1970. In each case where sample sizes permit confident comparison, relative growth in average hourly earnings was greater for nonunion than union workers and the ratio of union to nonunion wage rates declined demonstrably between 1969 and 1970. The fact that the union advantage in 12-month earnings is smaller than the advantage in 1969 hourly earnings partly reflects the reduction in the hourly wage advantage. However, it reflects other differences as well--e.g., in hours worked, weeks worked, overtime arrangements, mobility, and in the proportion who hold second jobs. Needless to say, considerable caution should be exercised in generalizing

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[7]These data may be used to illustrate a point made more abstractly above. If we were to define union status in our study in the same way as in previous research on this subject, about 15 percent of those who would be classified as "nonunion" workers would, in fact, be covered by collective bargaining (i.e., for whites it would be 12 percent = (45)(1-.83)/(55 + 45 (1-.83)) and for blacks it would be 19 percent = (45)(-1.72)/(55 + 45(1-.72)).

[8]For example, Ryscavage (1974), p. 7, estimates a difference in usual hourly earnings which ranges from 20 percent among black male craftsmen to 38 percent among white men working as transportation equipment operators.

Table 1 Collective Bargaining Coverage and Union Membership in 1969 of Blue Collar Workers, by Occupation and Race[a]

Occupation	Total number of respondents[b]	Percent[c] covered by collective bargaining	Total number of respondents covered by collective bargaining	Percent[c] union members
	WHITES			
Total or average	952	45	416	83
Craftsmen	315	38	115	87
Operatives	468	51	232	85
Nonfarm laborers	169	43	69	68
	BLACKS			
Total or average	471	45	193	72
Craftsmen	74	45	29	70
Operatives	252	47	113	78
Nonfarm laborers	145	41	51	63

a Respondents 17 to 27 years of age, not enrolled in school and employed as blue collar wage and salary workers in 1969.

b Portions of the subsequent analysis rely on fewer than the 1,423 sample cases shown here either because of instances where one or more necessary pieces of information were not ascertained or because some analyses are confined to those employed in both the 1969 and 1970 survey weeks.

c All statistics (percentages, means, regression coefficients) in this study are based on weighted observations. For a discussion of the sampling methods, see Appendix E.

Table 2 Earnings and Employment Experience of Blue Collar Workers in 1969 and 1970, by Race, Occupation and Collective Bargaining Coverage in 1969[a]

Earnings and employment experience[b]	WHITES				BLACKS			
	Total or average	Craftsmen	Operatives	Laborers	Total or average	Craftsmen	Operatives	Laborers
Total number of respondents[c]								
Union	416	115	232	69	193	29	113	51
Nonunion	536	200	236	100	278	45	139	94
Average hourly earnings, 1969								
Union	$3.72	$4.28	$3.50	$3.52	$3.00	$3.38	$2.99	$2.79
Nonunion	2.69	2.97	2.63	2.25	2.16	2.49	2.21	1.90
Union advantage[d]	39%	44%	33%	56%	39%	36%	35%	47%
Average hourly earnings, 1970								
Union	$4.01	$4.62	$3.76	$3.63	$3.03	j	$2.95	$2.90
Nonunion	3.09	3.29	3.06	2.63	2.42	$2.57	2.52	2.15
Union advantage[d]	30%	40%	23%	38%	25%	j	17%	35%
Average percentage increase in hourly earnings, 1969-70[e]								
Union	8.9	9.7	9.0	6.4	7.9	j	3.3	11.3
Nonunion	14.1	12.3	14.8	17.1	15.1	11.3	14.1	19.2
Average annual earnings, 1969-70[f]								
Union	$7,528	$8,861	$7,303	$5,841	$5,427	j	$5,230	$4,999
Nonunion	6,010	6,467	6,229	4,278	4,288	$5,426	4,496	3,291
Union advantage[d]	25%	37%	17%	37%	27%	j	16%	52%
Percent with provision for overtime pay differential, 1969 job								
Union	94	97	93	93	89	74	94	89
Nonunion	67	65	71	63	75	64	83	69

Table continued on next page.

Table 2 Continued

Earnings and employment experience[b]	WHITES				BLACKS			
	Total or average	Craftsmen	Operatives	Laborers	Total or average	Craftsmen	Operatives	Laborers
Average hours usually worked per week, 1969 job								
Union	41.8	41.5	42.3	40.6	42.1	41.3	42.8	41.3
Nonunion	43.5	43.9	44.5	40.2	42.2	40.4	43.0	41.9
Average number of weeks worked, 1969-70[g]								
Union	46.0	47.6	46.1	42.7	44.2	j	43.3	43.5
Nonunion	45.7	47.4	44.9	43.5	42.9	43.9	44.3	40.0
Percent with any weeks unemployed 1969-70[g]								
Union	27	18	26	46	27	j	32	25
Nonunion	22	18	21	35	37	26	34	47
Average number of weeks unemployed 1969-70[g,i]								
Union	3.0	2.4	2.5	6.0	3.8	j	5.4	2.1
Nonunion	2.0	1.8	1.9	2.5	4.7	3.9	4.3	5.8
Average socioeconomic status of occupation, 1969 job[h]								
Union	23.3	34.6	22.0	8.6	17.3	29.3	19.0	6.7
Nonunion	22.0	31.0	19.8	8.1	16.2	25.2	18.8	7.4
Percent highly satisfied with job, 1969								
Union	42	54	37	34	36	56	30	34
Nonunion	46	58	40	31	39	58	36	33
Percent highly satisfied with job, 1970								
Union	41	54	36	36	38	j	33	40
Nonunion	43	56	32	41	43	40	43	46

Table continued on next page.

Table 2 Continued

Earnings and employment experience[b]	WHITES				BLACKS			
	Total or average	Craftsmen	Operatives	Laborers	Total or average	Craftsmen	Operatives	Laborers
Percent receiving training, 1969-70[g]								
Union	26	34	24	16	16	j	13	13
Nonunion	22	30	20	6	10	8	14	5
Percent making voluntary job change, 1969-70[g]								
Union	15	16	12	24	15	j	15	23
Nonunion	20	21	18	25	20	19	18	23
Percent laid-off permanently or discharged, 1969-70[g]								
Union	15	16	14	16	13	j	14	16
Nonunion	10	10	8	14	17	19	17	16

a Respondents not enrolled in school and employed as blue collar wage and salary workers in 1969.
b For detailed definitions of some measures, see Glossary, Appendix C.
c The number of cases upon which any mean or percentage is based may vary slightly from this figure due to nonresponses on the particular variable.
d Defined as $\left[\frac{\text{union mean}}{\text{nonunion mean}} - 1\right] 100$.
e Defined as the mean of $\left[100 \left(\frac{\text{hourly earnings 1970}}{\text{hourly earnings 1969}}\right) - 100\right]$.
f Annual earnings refers to income from wages and salaries during the 12-month period between the 1969 and 1970 surveys.
g Refers to the 12-month period between the 1969 and 1970 surveys.
h Socioeconomic status is defined in terms of the Duncan index.
i Refers to all respondents, not solely to those who experienced unemployment during the period.
j Means and percentages not shown where base represents fewer than 25 sample cases.

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trends from these movements over a single year, especially since many workers covered by collective bargaining agreements renegotiated in 1968-1969 received deferred wage increases in 1970 which were disproportionately small because of the practice of "front-loading" of new contracts.[9]

Although there are several instances--in particular among white craftsmen and operatives--where the hourly earnings advantage of the unionized may be somewhat offset by virtue of their having worked fewer hours per week, in the main the data suggest that the large union advantage in hourly earnings is not significantly counteracted either by fewer hours usually worked per week or by fewer weeks worked in a 12-month period. Furthermore, workers covered by a collective bargaining agreement are far more likely to receive a premium for working overtime, which would contribute to widening the differential in annual earnings.

Despite the similarity between the union and nonunion groups in the number of weeks worked, the data suggest that white union workers were more prone than their nonunion counterparts to layoff and unemployment during the 1969-1970 period and to a longer duration of unemployment when it occurred. Among blacks, however, union-nonunion differences are exactly the reverse, as the young men who were covered by collective bargaining were less prone to layoff or a spell of unemployment and--at least among the laborers--they averaged fewer weeks of unemployment on occasions when unemployment was actually experienced. The extent to which these racial differences may be explained by white-black differences in industrial affiliation is addressed at a later point in this study.

At least in part, the union-nonunion differential in earnings may be attributable to differences in the occupational distributions of the two groups within each of the major blue collar categories examined. Even within occupation groups, the data in Table 2 suggest that those covered by collective bargaining tend to be disproportionately employed in the higher status and typically better paying trades. To a certain extent, this may mean that the unionized tend to possess greater abilities and skills--as is suggested by the differences in the likelihood of receiving training--and that they perhaps command higher earnings as a consequence of their superior talents as well as through collective bargaining coverage.

Although the economic advantages of collective bargaining are further evidenced by the data on the incidence of overtime premiums and by the greater protection from layoff and dismissal among blacks, there is little to suggest that job satisfaction is higher for union

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[9]Estey (1970).

than nonunion workers. On the contrary, the data provide some reason to suspect that covered workers are less highly satisfied with their jobs than are their noncovered counterparts. Since the unionized appear less prone to voluntary turnover, since they also possess a large advantage in earnings and status, and since unions are generally thought to increase "industrial democracy," one would expect that the unionized would be considerably more satisfied with their jobs than the nonunion workers.

On the other hand, the existence of a union is likely to make workers more aware than they otherwise would be of factors in the job situation that could be sources of discontent. In addition, to what extent the expressed dissatisfaction among these young workers is focused against unions themselves, rather than against employers, is a subject about which we have no direct evidence. Nevertheless, that our data indicate less satisfaction among covered than noncovered employees may be an important finding--especially in light of the growing concern for discontent among young blue collar workers.[10]

III UNION-NONUNION DIFFERENCES IN PERSONAL AND SITUATIONAL CHARACTERISTICS

Union-nonunion differences in earnings may stem from many sources, only one of which is the effect of collective bargaining. To repeat the example mentioned earlier, within a major occupation group such as craftsmen, union workers may have more favorable labor market experiences because they have brought to their trade greater abilities and skills and are therefore more productive. In such a case, they would have earned more than their nonunion counterparts even in the absence of unions. As another example, differences may reflect the fact that union jobs tend to be disproportionately concentrated in urban areas and in the North where wage rates tend to be higher.[11] Finally, union-nonunion

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[10] This growing concern has been clearly presented in many recent studies. See, for example, Work in America (1972) and Sheppard and Herrick (1972). It is also well to note in this context that the extent to which covered workers are not union members (Table 1) may reflect dissatisfaction with the union or that many young workers are serving probationary periods of employment during which they are not required to join the union--even under a union-shop agreement.

[11] A recent BLS report clearly demonstrates the existence of substantial differences in the extent of unionization on the basis of both region and degree of urbanization. Selected Earnings and Demographic Characteristics of Union Members, 1970 (1972), Table 11, pp. 22-25.

differentials may reflect differences in the ways in which the unionized and nonunionized sectors determine wages, hours, and conditions of employment. That is, union-nonunion earnings differentials may indeed reflect the "pure" effects of collective bargaining.

This section of the study serves essentially to highlight differences between covered and noncovered workers which may distort the effects of unionism on earnings and other aspects of labor market experience.[12] Union-nonunion differences in several personal characteristics of our sample of young male workers are presented in Table 3. Most of these characteristics reflect differences in abilities and skills that may contribute to the differentials in labor market experience over the 1969-1970 period previously observed. To begin with, the nonunion blue collar workers in the sample are 15 to 20 percentage points more likely than their union counterparts to be high school dropouts. Put another way, this means that in most cases the nonunion workers are one-and-one-half to two times as likely as the union workers to have dropped out of school. Moreover, the differences in the proportions who had received post-school vocational training by 1969 are even greater and the training gap widens monotonically for both whites and blacks with increasing skill level. On the other hand, there are no systematic differences in the high school curriculum pursued by union and nonunion workers.[13]

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[12] It should be made explicit at the outset, however, that it is not possible to control perfectly for all relevant union-nonunion differences. It is not possible, for example, to control for a spillover effect. That is, where union gains spill over into the nonunion sector--e.g., to prevent the organization of nonunion workers--differentials in wages, hours, and working conditions will inevitably understate the full impact of collective bargaining. See Rees (1962), p. 74. An institutionalized instance of the spillover effect is where the Davis-Bacon Act and/or its state-level counterparts operate to eliminate real union-nonunion differentials. Moreover, even if error-free measures of all relevant union-nonunion differences were available, it would not be possible to specify perfectly the exact functional relationships among the relevant variables. For these reasons, our estimates of the effects of unionism should be viewed as only approximations.

[13] Data not displayed here indicate that, in comparison to the nonunionized workers, the unionized came from families of higher socioeconomic status, where status is measured by a composite index based on five characteristics of the parental family. For details see Kohen (1973). This difference is consistent with contemporary hypotheses about segmented labor markets in which racial and ethnic minorities and those from lower social class backgrounds are disproportionately relegated to the worst jobs, which are also the jobs least likely to be organized.

Table 3 Personal Characteristics of Blue Collar Workers in 1969, by Race, Occupation, and Collective Bargaining Coverage[a]

Characteristic	WHITES			BLACKS		
	Craftsmen	Operatives	Laborers	Craftsmen	Operatives	Laborers
Total number of respondents[b]						
Union	115	232	69	29	113	51
Nonunion	200	236	100	45	139	94
Percent high school graduates						
Union	81	70	71	59	58	55
Nonunion	65	56	49	39	49	33
Percent with post-school vocational training, prior to 1969[c]						
Union	72	51	29	71	42	30
Nonunion	47	36	28	39	25	16
Percent who took vocational curriculum in high school						
Union	18	17	15	28	18	10
Nonunion	20	14	15	20	15	20
Average number of years of labor market experience[d]						
Union	6.6	5.8	5.4	7.0	6.3	6.0
Nonunion	6.2	6.0	4.4	8.5	6.8	6.5
Average years of service with 1969 employer						
Union	2.0	1.6	0.8	1.5	1.1	0.7
Nonunion	1.6	1.3	0.4	1.2	1.2	0.8
Average score on 1966 test of occupational information[e]						
Union	35.0	34.6	34.8	31.1	29.4	28.6
Nonunion	34.5	33.1	31.0	25.2	27.3	23.4

Table continued on next page.

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Table 3 Continued

Characteristic	WHITES			BLACKS		
	Craftsmen	Operatives	Laborers	Craftsmen	Operatives	Laborers
Percent with no health limitations[f]						
Union	92	91	98	92	91	88
Nonunion	89	87	91	95	94	99

a Respondents 17 to 27 years of age, not enrolled in school and employed as blue collar wage and salary workers in 1969.

b The number of cases upon which any mean or percentage is based may vary slightly from this figure due to nonresponses on the particular variable.

c Post-school vocational training is defined here as training received outside of regular school and outside of military service.

d Defined as age minus years of school completed minus 5. Therefore, the variable represents potential labor market experience and treats civilian and military experience equivalently.

e Test scores range from 0 to 56.

f Based on the response to questions asked in 1970 concerning the existence and duration of health limitations on the kind or amount of work the respondent can perform.

019

Another relevant characteristic, years of labor market experience as of 1969, captures experience in the broad sense of the term--i.e., the number of years since leaving school. Among whites, the unionized craftsmen and laborers are somewhat more experienced on the average than their nonunion counterparts, while unionized operatives are slightly less experienced. Among blacks, however, the unionized workers are from 6 to 18 months less experienced than nonunion workers depending upon whether skilled, semi-skilled, or unskilled. Although these differences are not entirely systematic with respect to unionism, the observation of some differences along with the importance of experience as a determinant of labor market success, necessitate controlling for this variable in examining the net effects of unionism.

Although union-nonunion differences in tenure with current employer are nowhere large, in the case of whites and among black craftsmen the differentials may nevertheless work to overstate the positive effects of unionism. A similar conclusion may also be reached in the case of the next characteristic shown in Table 3--extent of labor market information. Measured by a battery of test items, the labor market information scale purportedly captures a worker's understanding of occupational differences in function, entry requirements, and earnings.[14] To some extent, and most notably in the case of blacks, the higher earnings of unionized young males may also reflect their greater awareness of the ways in which the labor market operates and/or their higher level of general mental ability.[15]

Health characteristics, on the other hand, might cause gross earnings differentials between covered and noncovered workers to overstate the net effect of collective bargaining for whites, while having the opposite effect for blacks. Blacks covered by collective bargaining agreements are on the average about 6 percentage points more likely to report some form of health limitation, either temporary or more permanent, which restricts the kind or amount of work they are capable of performing. Among whites, the unionized are 3 to 7 percentage points less likely to be constrained by a health limitation.

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[14]There is evidence of a systematic relation between earnings and the extent of occupational information as measured by this scale. See Parnes and Kohen (1975). For a discussion of the reliability and validity of the scale itself, including a factor analysis, see Kohen and Breinich (1975).

[15]In the absence of a direct, independent measure of general mental ability it can be assumed that the measure of labor market information partially represents the effect of general ability on earnings. See Parnes and Kohen (1975) and Kohen (1973).

Because some situational characteristics may also account for some of the advantage of union workers, union-nonunion differences in industrial affiliation, region of residence, and size of community are presented in Table 4. Among whites, the unionized tend to be more concentrated in construction and manufacturing than their nonunion counterparts. Among blacks, the unionized craftsmen and operatives are substantially more likely to be in manufacturing industries, but they are somewhat less likely to be in the construction industry. It is quite possible, as these proportions indicate, that the white-black differences in susceptibility to layoff and unemployment may be partly attributable to racial differences in industrial distribution--since unionized blacks are 14 percentage points more likely than unionized whites to be in manufacturing and 8 percentage points less likely to be in construction. Finally, among both blacks and whites, the unionized tend to be disproportionately concentrated in the non-South and in large urban areas.[16] As a consequence, union-nonunion differences in wage rates may be overstated because of geographic differences in price level.

IV THE NET EFFECTS OF COLLECTIVE BARGAINING ON EARNINGS AND LABOR MARKET EXPERIENCE, 1969-1970

It has been demonstrated that numerous personal and situational characteristics must be controlled in order to ascertain the net effects of collective bargaining on earnings (Tables 3 and 4). These characteristics--which include industrial affiliation, education, training, experience, job tenure, extent of occupational information, health, region of residence, and degree of urbanization--reflect differences between union and nonunion workers which may confound the effects of collective bargaining. To control for these differences, multiple regression analysis has been applied, with separate analyses for whites and blacks within both the union and nonunion sectors.[17]

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[16] Urban areas have been defined on the basis of labor force size in the local labor market where a respondent resides. Local labor markets--or metropolitan areas--with more than 300,000 persons in the labor force as of 1960 were classified as large urban areas.

[17] A series of statistical tests supported our hypotheses that significant interactions exist between race and other determinants of the several "dependent" variables on the one hand, and between collective bargaining coverage and those determinants on the other. More specifically, Chow tests of the regression coefficients forced us to reject the hypotheses of equality between the coefficients for different groups. For details on the statistical procedure see Chow (1960). Examples of the outcomes of the statistical procedure are as follows: (1) the

Table 4 Situational Characteristics of Blue Collar Workers in 1969 by Occupation, Race, and Collective Bargaining Coverage[a]

Characteristic	Craftsmen	Operatives	Laborers
	WHITES		
Total number of respondents			
Union	115	232	69
Nonunion	200	236	100
Percent in construction			
Union	36	11	34
Nonunion	21	6	38
Percent in manufacturing			
Union	40	68	31
Nonunion	36	57	20
Percent in the South[b]			
Union	20	15	21
Nonunion	37	41	39
Percent in large urban areas[c]			
Union	42	33	30
Nonunion	25	23	24
	BLACKS		
Total number of respondents			
Union	29	113	51
Nonunion	45	139	94
Percent in construction			
Union	36	1	26
Nonunion	38	9	16
Percent in manufacturing			
Union	49	88	38
Nonunion	20	49	37
Percent in the South[b]			
Union	62	34	30
Nonunion	71	76	83
Percent in large urban areas[c]			
Union	67	49	42
Nonunion	32	26	18

a Respondents 17 to 27 years of age, not enrolled in school and employed as blue collar wage and salary workers in 1969.

b The South includes 16 states and the District of Columbia.

c Large urban areas are defined as those whose labor force (in 1960) contained at least 300,000 persons.

In addition to controlling for these differences in examining the effects of collective bargaining on hourly earnings, we have similarly examined the effects of unionism on four other dimensions of 1969-1970 labor market experience: relative growth in hourly earnings over the 1969-1970 period, the incidence of unemployment, number of weeks unemployed in a 12-month period, and number of hours usually worked per week. Hence, it is possible to examine the degree to which any net advantage of the unionized in hourly earnings may be offset by fewer hours of work, more unemployment, and/or less growth in earnings.

The importance of investigating the possibility of offsetting effects stems mainly from the fact that institutionalized seniority arrangements in the union sector may work to the disadvantage of the young. Especially in a period such as 1969-1970 when unemployment was rising, those lowest in seniority may have seen the effect of unionism on their hourly earnings eroded considerably by shorter hours of work and/or greater unemployment than might have occurred had these same individuals been employed in the nonunion sector. Although the gross union-nonunion differences in Table 2 with respect to usual hours worked and unemployment provide little consistent evidence that this was the case, it is not implausible that the gross differences may understate the adverse effects of unionism. That is, since in many respects the covered workers possessed greater abilities and skills than their noncovered counterparts (Table 3), one would have expected them to fare better than the noncovered if unionism had no disadvantageous impact whatsoever on these labor market experiences. Additionally, the hourly earnings advantage of the unionized at the beginning of the period may have been reduced by greater growth in earnings in the nonunion than union sector, because of the small (deferred) wage increases received by the unionized in 1970.[18]

The effects of collective bargaining on each of these five dimensions of 1969-1970 labor market experience--controlling for union-nonunion differences in personal and situational characteristics--are estimated for our sample of young blue collar workers by race and

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value of the F-ratio in testing for equality between covered and noncovered white workers in the hourly earnings equation was 15.21, when the critical value ($\alpha < .01$) for rejection was 2.09; (2) the corresponding figures for blacks were 7.30 and 2.12; (3) the calculated and critical values of F in testing for racial equality among covered workers were 4.09 and 2.10, respectively; and (4) the corresponding figures among noncovered workers were 8.71 and 2.10.

[18] See footnote 9.

occupation in Table 5.[19] The actual regression results upon which these estimates are based are presented in Appendix A.

Craftsmen

The effects of collective bargaining on the earnings of young craftsmen were indeed substantial (Table 5). At the beginning of the period, unionized whites earned about 39 percent more per hour than comparable nonunion workers, although they worked almost two hours less per week and experienced less growth in earnings during the period. Furthermore, unionized whites were not dissimilar to the nonunionized in terms of unemployment experience. Among blacks, unionized craftsmen enjoyed a 26 percent advantage in hourly wage at the beginning of the period. Additionally, the effects of collective bargaining on average hourly earnings were not offset by shorter hours. In fact, young black craftsmen covered by a collective bargaining agreement worked about one hour more per week than their counterparts who were not covered. All in all, collective bargaining per se accounts for over 80 percent of the observed union-nonunion difference in earnings among white craftsmen and the corresponding proportion among black craftsmen is about 70 percent.

The effects of unionism on relative earnings also varies substantially according to major industry division, as can be seen by the differences in the regression coefficients for the dummy variable representing industry in Table A-1. Thus, for example, being covered by collective bargaining is far more advantageous in terms of earnings in the construction industry than in manufacturing. Among whites, unionized construction craftsmen enjoyed a 53 percent advantage over their nonunion counterparts and their earnings grew more rapidly during the 1969-1970 period as well (Table 6). Their unionized counterparts in manufacturing, however, enjoyed only a 23 percent differential, and even this declined during the period as manufacturing earnings apparently grew faster in the nonunion sector. In both industries the unionized craftsmen worked fewer hours than the nonunionized, and the unionized in manufacturing averaged slightly fewer than comparable union workers in construction.

In contrast to these greater union earnings advantages in the construction industry are the effects of collective bargaining on the incidence and duration of unemployment. In this case, union workers

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[19]The estimate is calculated by evaluating the regression equation for respondents covered by collective bargaining at the mean values of the variables for those not covered--within each race-occupation group. Thus, the estimate represents what nonunion workers would experience or earn if they were in the union sector.

Table 5 Estimated Net[a] Effect of Collective Bargaining on Selected Earnings and Employment Experience of Blue Collar Workers, by Occupation and Race[b]

Earnings or employment experience	Craftsmen		Operatives		Laborers	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
Average hourly earnings, 1969						
a) Union mean-actual	$4.28	$3.38	$3.50	$2.99	$3.52	$2.79
b) Nonunion mean-actual	2.96	2.49	2.62	2.22	2.25	1.90
c) Nonunion mean-estimated in union situation[c]	4.10	3.13	3.41	2.68	3.41	2.17
Gross union/nonunion differential [100(a/b)-100]	45%	36%	34%	35%	56%	47%
Net union effect [100(c/b)-100]	39%	26%	30%	21%	52%	14%
Percentage change in hourly earnings, 1969-70						
a) Union mean-actual	9.7	e	9.5	5.6	8.2	12.1
b) Nonunion mean-actual	13.1	10.1	14.4	13.7	15.3	19.8
c) Nonunion mean-estimated in union situation[d]	7.4	e	9.0	2.4	7.3	10.8
Gross union/nonunion difference [a-b]	- 3.4	e	- 4.9	- 8.1	- 7.1	- 7.7
Net union effect [c-b]	- 5.7	e	- 5.4	-11.3	- 8.0	- 9.0
Likelihood of unemployment between 1969 and 1970 surveys						
a) Union mean-actual	.19	e	.26	.32	.47	.25
b) Nonunion mean-actual	.19	.26	.21	.35	.34	.47
c) Nonunion mean-estimated in union situation[c]	.17	e	.25	.30	.48	.23
Gross union/nonunion difference [a-b]	.00	e	.05	- .03	.13	- .22
Net union effect [c-b]	- .02	e	.04	- .05	.14	- .24
Number of weeks unemployed between 1969 and 1970 surveys						
a) Union mean-actual	2.3	e	2.2	3.9	5.8	0.6
b) Nonunion mean-actual	1.9	3.9	2.1	4.6	2.7	6.0
c) Nonunion mean-estimated in union situation[c]	2.0	e	2.0	2.6	5.9	0.4
Gross union/nonunion difference [a-b]	0.4	e	0.1	- 0.7	3.1	- 5.4
Net union effect [c-b]	0.1	e	- 0.1	- 2.0	3.2	- 5.6

Table continued on next page.

Table 5 Continued

Earnings or employment experience	Craftsmen		Operatives		Laborers	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
Usual hours worked per week on 1969 job						
a) Union mean-actual	41.6	41.5	42.3	42.6	40.5	41.7
b) Nonunion mean-actual	43.8	40.5	44.3	43.2	39.8	41.7
c) Nonunion mean-estimated in union situation[c]	42.2	41.4	42.8	43.1	40.4	43.8
Gross union/nonunion difference [a-b]	- 2.2	1.0	- 2.0	- 0.6	0.7	0.0
Net union effect [c-b]	- 1.6	0.9	- 1.5	- 0.1	0.6	2.1

a The differences shown are "net" in the sense of indicating the covered/noncovered difference after other characteristics have been held constant by regression analysis. These characteristics are industry group, education, race, occupational training, labor market experience, high school curriculum, tenure, occupational information, health, region of residence, and size of local labor market.

b The universe for the analysis of average hourly earnings in 1969 and usual hours worked per week is respondents 17 to 27 years of age, not enrolled in school and employed as blue collar wage and salary workers in the 1969 survey week. For the analyses of unemployment and change in average hourly earnings the universe is further confined to those employed at the time of the 1970 survey. Since nonrespondents on any of the variables included in the regressions are excluded, the "actual" means shown here may differ slightly from those displayed in Tables 1-4.

c The estimate is calculated by evaluating the regression equation for respondents covered by collective bargaining at the mean values of the variables for those not covered--within each race-occupation group. Thus, the estimate represents what nonunion workers would experience or earn if they were in the union sector.

d In addition to the description in footnote c, the estimate is based on evaluating the union equation at the estimated average hourly earnings (in 1969) of the nonunion workers, which are shown on line c of the first panel of this table.

e Means and differences not shown where the base represents fewer than 25 respondents.

Table 6 Estimated Net[a] Effect of Collective Bargaining on Selected Earnings and Employment Experience in Selected Occupation-Industry-Race Groups[b]

Earnings or employment experience	Craftsmen			Operatives		
	WHITES			WHITES		BLACKS
	Manufacturing	Construction	Other[c]	Manufacturing	Other[c]	Manufacturing
Average hourly earnings, 1969						
a) Union mean-actual	$3.79	$4.99	$4.05	$3.32	$3.58	$3.00
b) Nonunion mean-actual	3.05	3.23	2.75	2.72	2.42	2.24
c) Nonunion mean-estimated in union situation[d]	3.74	4.94	4.00	3.24	3.50	2.76
Gross union/nonunion differential [100(a/b)-100]	24%	54%	47%	22%	48%	34%
Net union effect [100(c/b)-100]	23%	53%	45%	19%	45%	23%
Percentage change in hourly earnings, 1969-70						
a) Union mean-actual	0.2	18.6	9.2	3.7	12.7	5.1
b) Nonunion mean-actual	10.2	15.1	12.6	12.8	15.2	3.2
c) Nonunion mean-estimated in union situation[e]	0.0	18.4	9.0	4.9	13.9	0.1
Gross union/nonunion difference [a-b]	-10.0	3.5	- 3.4	- 9.1	- 2.5	1.9
Net union effect [c-b]	-10.2	3.3	- 3.6	- 7.9	- 1.3	- 3.1
Usual hours worked per week on 1969 job						
a) Union mean-actual	41.3	41.7	41.9	42.1	42.7	42.9
b) Nonunion mean-actual	42.9	43.5	44.7	43.6	45.4	44.5
c) Nonunion mean-estimated in union situation[d]	41.9	42.3	42.5	42.6	43.2	44.6
Gross union/nonunion difference [a-b]	- 1.6	- 1.8	- 2.8	- 1.5	- 2.7	- 1.6
Net union effect [c-b]	- 1.0	- 1.5	- 2.2	- 1.0	- 2.2	0.1
Likelihood of unemployment between 1969 and 1970 surveys						
a) Union mean-actual	.13	.29	.12	.24	.24	.33
b) Nonunion mean-actual	.18	.31	.17	.22	.21	.37
c) Nonunion mean-estimated in union situation[d]	.14	.30	.13	.25	.24	.28
Gross union/nonunion difference [a-b]	- .05	- .02	- .05	.05	.05	- .04
Net union effect [c-b]	- .04	- .01	- .04	.03	.03	- .09

Table continued on next page.

Table 6 Continued

Earnings or employment experience	Craftsmen			Operatives		
	WHITES			WHITES		BLACKS
	Manufacturing	Construction	Other[c]	Manufacturing	Other[c]	Manufacturing
Number of weeks unemployed between 1969 and 1970 surveys						
a) Union mean-actual	1.8	3.1	0.7	2.2	1.1	4.0
b) Nonunion mean-actual	2.1	2.7	1.4	2.3	1.6	4.9
c) Nonunion mean-estimated in union situation[d]	2.2	3.5	1.1	2.3	1.2	2.9
Gross union/nonunion difference [a-b]	- 0.3	0.4	- 0.7	- 0.1	- 0.5	- 0.9
Net union effect [c-b]	- 0.1	0.8	- 0.3	0.0	- 0.4	- 2.0

a See footnote a, Table 5.

b For a general description of the universe, see footnote b, Table 5. The subgroups shown here are the only ones with sufficient sample cases of both covered and noncovered workers to provide reliable statistical estimates.

c The term "other" includes all nonmanufacturing and nonconstruction industries.

d See footnote c, Table 5.

e See footnote d, Table 5.

in manufacturing were better off than those in construction relative to their nonunion counterparts. In the construction industry white nonunion craftsmen were only slightly more likely (31 versus 29 percent) to experience a spell of unemployment than comparable union workers, and the unorganized actually averaged about one-half week less joblessness. In manufacturing, however, the nonunionized were one-third again as likely as the unionized (18 versus 13 percent) to have been unemployed and the nonunionized averaged about one-half week longer duration of unemployment during the 12-month period. Thus, the greater impact of unionism on relative earnings among construction workers is at least partially offset by the greater union impact on the stability of employment in nonconstruction industries.[20]

Operatives

Among both white and black operatives, the overall effects of collective bargaining on 1969 average hourly earnings are substantial, but noticeably smaller than the union effects observed among craftsmen (Table 5). Likewise, the effects of unionism on the incidence of unemployment and on growth in earnings are somewhat smaller among operatives than craftsmen. On balance however, the evidence suggests that unions have raised the earnings of operatives for whom they bargain considerably above those of comparable unorganized workers. Among whites, for example, the unionized enjoyed a net 30 percent hourly wage advantage at the beginning of the period. Furthermore, the unionized averaged about the same number of weeks of unemployment as their nonunion counterparts. Although they worked about one and one-half hours less per week, and although their earnings grew less rapidly than comparable nonunion workers, it is doubtful that their annual earnings advantage was appreciably diminished.

Among blacks, the effects of collective bargaining on 1969 hourly wages were on average about 21 percent (Table 5). While this effect was offset somewhat during the course of the period by the greater wage advancements in the nonunion sector, there were virtually no adverse effects of unionism on hours worked per week or on either the incidence or duration of unemployment. In fact, unionized black operatives averaged about one and one-half weeks less joblessness than their nonunion counterparts.

Among both white and black operatives the effects of collective bargaining on the various dimensions of earnings examined also appear to vary according to industry (Table 6). In manufacturing, for example,

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[20] The small number of sample cases of unionized black craftsmen in the construction industry with data available on all relevant variables precludes an analysis comparable to that for whites.

the effects of unionism on hourly earnings are only slightly smaller for operatives than for craftsmen. The smaller effect observed among all operatives in Table 5 appears to be almost solely the effect of the construction industry. In industries other than construction and manufacturing--i.e., the service-producing sector--the wage effects of unionism are large and show little evidence of being offset through more unemployment or lesser growth in earnings. In manufacturing, however, the wage differentials between union and nonunion operatives--being somewhat smaller at the beginning of the period--may possibly be reduced to a level which is more consistent with the overall estimates of Lewis (1963).

As was found for craftsmen, among white operatives only a small proportion of the gross union-nonunion differential can be attributed to different personal and situational characteristics of covered and noncovered workers. In contrast, as much as one-third of the gross union-nonunion difference in hourly earnings among black operatives in manufacturing is eliminated when personal and situational characteristics are held constant--i.e., the wage differential declines from 34 to 23 percent (Table 6). This intercolor difference, of course, is consistent with the historically greater selectivity of the trade union movement among black workers than among white workers.

Laborers

The net effects of collective bargaining on the earnings of laborers were also substantial, but they varied considerably by race (Table 5). Among whites, the net union-nonunion differential in 1969 hourly earnings was 52 percent--13 percentage points greater than the effect among white craftsmen and more than 20 percentage points greater than the effect among white operatives. The comparable union advantage among blacks, in contrast, was only 14 percent--smaller than the effects among black craftsmen and operatives. The effects of unionism on other dimensions of total earnings, however, were working systematically to reduce union-nonunion differences in annual earnings among whites, and to widen the union advantage among blacks.

While white union laborers averaged 5.8 weeks of unemployment, for example--three weeks more than their nonunion counterparts--black union laborers averaged about one-half week of unemployment--almost five and one-half weeks less than their nonunion counterparts. Likewise, while white union laborers were a third (47 versus 34 percent) more likely to experience a spell of unemployment than comparable nonunion laborers, black union laborers were only half as likely as their nonunion counterparts to have experienced any unemployment (25 versus 47 percent). In addition, the data on hours usually worked per week suggest that

the union advantage among black laborers was larger than the 14 percent estimated on the basis of hourly earnings.[21]

V COMPARISON OF RACIAL DIFFERENCES IN THE UNION AND NONUNION SECTORS

In the preceding section it has not been possible to examine racial differences in earnings within the union and nonunion sectors of the labor market.[22] Nonetheless, it has been observed that unionism is often differentially effective for blacks and whites--e.g., in terms of reducing susceptibility to unemployment. Yet while unions may in some cases be more advantageous for blacks than whites, this does not mean that there are no racial differences in a particular dimension of labor market experience in the unionized sector. On the contrary, as Ashenfelter has also noted, it may simply mean that there is "less discrimination against black workers in the average unionized labor market than in the average nonunion labor market, but not that discrimination is absent from the former."[23]

The purpose of this section of the analysis is to compare racial differences in several dimensions of labor market experience among comparable whites and blacks in the union sector, with racial differences among comparable whites and blacks in the nonunion sector. The dimensions of experience that are examined are the same ones explored in the preceding section. It should be noted, however, that racial differences within the union sector cannot capture whatever effects unionism may have that result from discrimination in access to union membership.

Data displaying the estimates of gross and net racial differences in each aspect of labor market experience are presented by occupation and collective bargaining status in Table 7. The regression results from which these estimates were obtained, presented in Appendix A, are the same as those used for the calculation of the net effects of collective bargaining coverage. The procedure used to move from the

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[21] The small number of sample cases of laborers covered by collective bargaining precludes our analysis of union effects within industry groups.

[22] In the preceding section our standardization for comparable characteristics was done <u>within</u>, not <u>across</u>, racial groups. Thus, for example, unionized whites were not made comparable to unionized blacks. For a more technical explanation, see footnote 24 below.

[23] Ashenfelter (1972), p. 462.

Table 7 Estimated Net[a] Racial Differences in Selected Earnings and Employment Experience, by Occupation and Collective Bargaining Coverage[b]

Earnings or employment experience	Craftsmen		Operatives		Laborers	
	Union	Nonunion	Union	Nonunion	Union	Nonunion
Average hourly earnings, 1969						
a) White mean-actual	$4.28	$2.96	$3.50	$2.62	$3.52	$2.25
b) Black mean-actual	3.38	2.49	2.99	2.22	2.79	1.90
c) Black mean-estimated with white opportunities[c]	4.18	2.92	3.32	2.62	3.38	2.15
Gross racial differential [100(a/b)-100]	27%	19%	17%	18%	26%	18%
Net race effect [100(c/b)-100]	25%	18%	12%	18%	22%	13%
Percentage change in hourly earnings, 1969-70						
a) White mean-actual	9.7	13.1	9.5	14.4	8.2	15.3
b) Black mean-actual	e	10.1	5.6	13.7	12.1	19.8
c) Black mean-estimated with white opportunities[d]	e	5.6	4.1	11.3	2.2	10.9
Gross racial difference [a-b]	e	3.0	3.9	0.7	- 3.9	- 4.5
Net race effect [c-b]	e	- 4.5	- 1.5	- 2.4	- 9.9	- 8.9
Likelihood of unemployment between 1969 and 1970 surveys						
a) White mean-actual	.19	.19	.26	.21	.47	.34
b) Black mean-actual	e	.26	.32	.35	.25	.47
c) Black mean-estimated with white opportunities[c]	e	.25	.24	.21	.44	.29
Gross racial difference [a-b]	e	- .07	- .06	- .14	.22	- .13
Net race effect [c-b]	e	- .01	- .08	- .14	.19	- .18
Number of weeks unemployed between 1969 and 1970 surveys						
a) White mean-actual	2.3	1.8	2.2	2.1	5.8	2.7
b) Black mean-actual	e	3.9	3.9	4.6	0.6	6.0
c) Black mean-estimated with white opportunities[c]	e	2.4	1.8	1.4	5.3	2.0
Gross racial difference [a-b]	e	- 2.1	- 1.7	- 2.5	5.2	- 3.3
Net race effect [c-b]	e	- 1.5	- 2.1	- 3.2	4.7	- 4.0

Table continued on next page.

Table 7 Continued

a The differences shown are "net" in the sense of indicating the white/black difference after other characteristics have been held constant by regression analysis. These characteristics are industry group, education, occupational training, labor market experience, high school curriculum, tenure, occupational information, health, region of residence, and size of local labor market.

b The universe for the analyses of average hourly earnings in 1969 and usual hours worked per week is respondents 17 to 27 years of age, not enrolled in school and employed as blue collar wage and salary workers in the 1969 survey week. For the analyses of unemployment and change in average hourly earnings the universe is further confined to those employed at the time of the 1970 survey. Since nonrespondents on any of the variables included in the regressions are excluded, the "actual" means shown here may differ slightly from those displayed in Tables 1-4.

c The estimate is calculated by evaluating the regression equation for white respondents at the mean value of the variables for black respondents--within each unionization-occupation group.

d In addition to the description in footnote c, the calculation is based on evaluating the white equation at the estimated average hourly earnings of the black workers, which are shown on line c of the first panel of this table.

e Means and differences not shown where base represents fewer than 25 sample cases.

gross racial difference to the net difference was identical to the one used to adjust the gross union-nonunion differences to net differences. Thus, for example, we estimate what a black craftsmen covered by collective bargaining would earn if his wages were determined in the same way as those of his white counterpart by evaluating the wage regression equation for white union workers at the mean values for black union craftsmen.[24] In contrast to the earlier presentation (Tables 5 and 6) in which we showed the net effect of collective bargaining, here we display the net effect of race (i.e., the net effect "of being white"). One may, of course, label this as the effect of racial discrimination.

Underlying all of the findings discussed below is a complex set of effects displayed in the individual regression equations (Tables A-1 to A-5). For example, while irrespective of collective bargaining coverage, the gain to the wages of blacks from living outside of the South is larger than for whites, the differential gain is larger among the unionized. This, of course, is consistent with unions in the North being more racially egalitarian than their Southern counterparts. Both labor market knowledge and experience yield greater payoffs for whites than for blacks, and the racial difference seems more pronounced among

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[24] It must be noted that the procedure used here may yield rather different numerical estimates from those used to isolate the "pure" effect of collective bargaining. Thus, it is not legitimate to employ, say, the estimated earnings shown in Table 6 to assess racial differences, holding all other things constant. This may be demonstrated by reference to the following equations, using the hourly earnings equation as an example. Consider the four estimated equations for white union (WU), white nonunion (WNU), black union (BU) and black nonunion (BNU) workers, respectively.

(1) $\overline{WUE}\ (\bar{E}_1) = \Sigma \hat{\alpha}_i \bar{X}_{1i}$, (2) $\overline{WNUE}\ (\bar{E}_2) = \Sigma \hat{\beta}_i \bar{X}_{2i}$,

(3) $\overline{BUE}\ (\bar{E}_3) = \Sigma \hat{\gamma}_i \bar{X}_{3i}$, (4) $\overline{BNUE}\ (\bar{E}_4) = \Sigma \hat{\delta}_i \bar{X}_{4i}$. To assess the net impact of unionism (collective bargaining) on hourly earnings we compared $\bar{E}_1$ with $\bar{E}_2^* = \Sigma \hat{\alpha}_i \bar{X}_{2i}$ and $\bar{E}_3$ with $\bar{E}_4^* = \Sigma \hat{\gamma}_i \bar{X}_{4i}$ for whites and blacks, respectively. To calculate net racial differentials within the union and nonunion sectors, respectively, we compare $\bar{E}_1$ with $\bar{E}_3' = \Sigma \hat{\alpha}_i \bar{X}_{3i}$ and $\bar{E}_2$ with $\bar{E}_4' = \Sigma \hat{\beta}_i \bar{X}_{4i}$. Clearly, $\bar{E}_2^*$ and $\bar{E}_4^*$ cannot be used to examine the net racial differentials in the nonunion sector because they have not been calculated "holding all other racial differences constant." Furthermore, it is clear that $\bar{E}_4^*$ and $\bar{E}_4'$ will only be equal under very special circumstances, e.g., when each $\hat{\beta}_i$ equals its counterpart $\hat{\gamma}_i$.

workers not covered by collectively bargained agreements. In contrast, education appears to yield a greater monetary return among blacks than among whites in the unionized sector, while the opposite is true for the nonunionized. As a final example, among workers covered by collective bargaining, having completed a vocational curriculum in high school yields a much larger (nearly three times) advantage to blacks than to whites. Among the nonunionized there is no appreciable intercolor difference in the impact of high school curriculum on earnings.

Craftsmen

Gross racial differences in 1969 average hourly earnings are about 27 percent in favor of whites in the union sector of the labor market and 19 percent in the nonunion sector, and the respective net race effects are 25 and 18 percent. That is, within each sector, nearly all of the black-white difference in hourly earnings is due to differential treatment of (or "returns" to) the attributes of whites and blacks. Thus, the net racial differentials among craftsmen imply somewhat greater racial equality in the nonunion sector. This conclusion must be tempered by our inability to analyze racial differences (according to collective bargaining coverage) in other employment experiences because of the small number of sample cases of unionized black craftsmen for whom the relevant information is available.

Operatives

In terms of 1969 average hourly earnings, gross racial differentials among operatives are about the same size in the unionized and nonunionized sectors and are somewhat smaller than among craftsmen (Table 7). As was found in the case of craftsmen, in each sector the vast majority of the white wage advantage is attributable to racially unequal effects of the characteristics of workers. However, in contrast to the conclusion concerning craftsmen, the evidence on net racial wage differentials among operatives indicates greater racial equality among those covered by collective bargaining than among those not covered. That is, eliminating the racial differentials in treatment in the union sector would reduce the white wage advantage from 17 to 5 percent, but the same change in the nonunion sector would reduce it from 18 to 0 percent. This intersector difference is somewhat attenuated by the data relevant to hourly earnings growth insofar as the white wage advantage widened more between 1969 and 1970 among the unionized.

The data with respect to unemployment suggest that hourly earnings information probably understate the racial differentials in annual earnings, because black workers experienced more and longer spells of joblessness, irrespective of unionization status. Consistent with the wage data, the unemployment data imply greater racial equality in the union sector--i.e., the black-white difference is larger among those not covered by collective bargaining. In sum, among young operatives

it is clear that the relative annual earnings disadvantage of blacks is diminished by collective bargaining coverage.

Laborers

The evidence on racial differences in hourly earnings among nonfarm laborers yields nearly the same inference as was drawn for craftsmen, namely that racial equality seems to be more prevalent among workers not covered by collective bargaining agreements. Furthermore, it is only among these unskilled workers that we observe any narrowing of the black-white relative wage differential over the 1969-1970 period, with the narrowing being of about the same magnitude for union and nonunion workers. However, the unemployment data tell a different story than the wage data so that unambiguous conclusions are not possible. More specifically, among the unionized laborers susceptibility to and duration of unemployment are actually higher for whites than for blacks, whereas the opposite is true among the nonunionized.

VI SUMMARY AND CONCLUSIONS

The purpose of this study has been to examine the effects of collective bargaining on the relative earnings and employment experience of young blue collar males over the 1969-1970 period. Specifically, we have examined the effects of collective bargaining on five dimensions of labor market experience: (1) hourly rate of pay at the beginning of the period; (2) hours usually worked per week; (3) likelihood of being unemployed during the 12-month period; (4) duration of unemployment; and (5) growth in hourly earnings during the period. Additionally, we have examined the relationship between unionism and racial differentials in these measures of labor market experience. In all cases, we have attempted to ascertain the effects of collective bargaining on comparable workers within each race group.

As an introduction to this analysis, the study highlighted "gross" union-nonunion differences in several dimensions of labor market experience during the period. In addition to the five listed above, union-nonunion differences in number of weeks worked, occupational status, provisions for overtime pay premiums, level of job satisfaction, frequency of voluntary turnover, and incidence of layoff were presented by major occupational category and race. Union-nonunion differences in a wide range of personal and situational characteristics--i.e., education, training, amount of labor market experience, tenure, extent of occupational information, health, industry, region of residence, and size of community of residence--were also presented and discussed.

The findings of this study leave little doubt that collective bargaining coverage has a substantial net impact on the hourly earnings of both white and black blue collar males in the early stages of their work careers. Furthermore, among blacks, there is considerable

evidence that the unionized experienced a good deal less unemployment than their nonunionized counterparts. In terms of average hourly earnings, our estimates of the relative net advantage of the unionized range from 14 percent among black nonfarm laborers to 52 percent among white nonfarm laborers, with the figure for operatives and craftsmen falling in the 20-40 percent range. Our data suggest some net narrowing of these wage differentials during the 1969-1970 period, probably partly as a result of the small deferred wage increases built into union contracts renegotiated in 1968-1969.[25]

Within major occupational categories the union earnings advantage was found to vary substantially according to major industry division, being noticeably smaller in manufacturing than in construction. Although young black men working in blue collar jobs covered by collective bargaining clearly are better off than their counterparts in noncovered jobs, our analysis does not yield an unambiguous answer to the question of whether the disadvantage of blacks relative to whites is greater in the unionized or nonunionized sector. The data on hourly earnings among craftsmen and laborers (but not operatives) tend to support a hypothesis of greater racial equality in the nonunion sector. In contrast, the data on unemployment of operatives and laborers suggest greater racial equality in the union sector. Thus, we are not as confident about the impact of unionization on racial inequality in annual income as some writers, e.g., Hill (1974), seem to be.

Overall, our findings are in accord with several recent studies which have demonstrated greater effects of unionism on relative earnings than were estimated by Lewis (1963). Ashenfelter (1973) and Stafford (1968) used microeconomic data to estimate union effects on the earnings of blue collar workers during the 1960's which exceeded those of Lewis. Similarly, a study by Ryscavage (1974) using data on 1973 earnings contains estimates of union wage effects ranging from 20 to 45 percent among male blue collar workers.

Of course, our findings are not strictly comparable to those of previous research. For one thing, they are based on a restricted age cohort of blue collar males--young men who were between 17 and 27 years old in 1969--for whom the effects of unionism may well be below average because their generally short tenure leaves them relatively unprotected by the powerful seniority arrangements in the union sector. Thus, the findings are not necessarily generalizable to all blue collar males. On the other hand, for this particular cohort, our findings probably yield a better estimate of the impact of unionism since, to the best of our knowledge, ours is the only study based on micro data that uses collective bargaining coverage rather than union membership as the criterion of organization.

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[25]For discussion of the practice of "front-loading" new contracts, see Estey (1970).

APPENDIXES

APPENDIX A

SUPPLEMENTARY TABLES

Table A-1 Regression Results: Determinants of 1969 Average Hourly Earnings, by Race and Collective Bargaining Coverage[a]

(t-ratios in parentheses)

Explanatory variables[b]	WHITES		BLACKS	
	Union	Nonunion	Union	Nonunion
Craftsmen	0.64*	0.35*	0.45**	0.41*
	(3.74)	(3.06)	(2.02)	(3.39)
Operatives	0.23	0.16	0.37**	0.16**
	(1.51)	(1.39)	(2.14)	(1.88)
Construction	0.94*	0.48*	1.48*	0.14
	(5.85)	(4.28)	(6.25)	(1.17)
Manufacturing	- 0.26**	0.30*	0.23	0.07
	(- 1.92)	(3.57)	(1.24)	(0.79)
Highest year of school completed	0.04	0.17*	0.13*	0.10*
	(0.84)	(5.76)	(2.62)	(3.97)
Occupational training prior to 1969	- 0.04	- 0.05	- 0.18	- 0.01
	(- 0.39)	(- 0.64)	(- 1.29)	(- 0.06)
Vocational curriculum	0.17	- 0.03	0.54*	- 0.09
	(1.13)	(- 0.23)	(2.83)	(- 0.74)
Labor market experience	0.07*	0.12*	0.05**	0.03*
	(3.22)	(8.61)	(1.89)	(2.38)
Tenure with 1969 employer	0.02	0.03	0.04	0.00
	(0.76)	(1.52)	(0.83)	(0.15)
Occupational information	0.02**	0.02*	- 0.00	0.00
	(2.18)	(2.85)	(- 0.11)	(0.26)
No health limitation, 1969	0.04	0.09	- 0.01	0.18
	(0.24)	(0.91)	(- 0.05)	(1.31)
Residence in South, 1969	- 0.42*	- 0.17**	- 0.77*	- 0.43*
	(- 2.98)	(- 2.01)	(- 4.92)	(- 3.94)
Residence in large city, 1969	0.21**	0.35*	0.29**	0.16
	(1.85)	(3.79)	(1.88)	(1.50)
Constant	1.81*	- 0.95*	0.79	0.82**
	(3.24)	(- 2.80)	(1.28)	(2.52)
$\bar{R}^2$	.27	.32	.37	.23
F ratio	12.6	19.8	9.58	7.45
Total number of respondents	415	531	193	275
Mean of dependent variable	3.72	2.68	3.00	2.16

a Respondents 17 to 27 years of age not enrolled in school and employed as blue collar wage and salary workers in 1969.

b For a complete description of the variables and units of measurement, see Glossary and text.

* Significant at $\alpha < .01$.

** Significant at $.01 < \alpha < .05$.

Table A-2 Regression Results: Determinants of the Likelihood of Unemployment between the 1969 and 1970 Surveys, by Race and Collective Bargaining Coverage[a]

(t-ratios in parentheses)

Explanatory variables[b]	WHITES		BLACKS	
	Union	Nonunion	Union	Nonunion
Craftsmen	-21.9*	- 6.3	- 1.4	-23.3*
	(- 3.00)	(- 1.10)	(- 0.11)	(- 2.43)
Operatives	-13.8**	- 3.5	19.7	-12.9**
	(- 2.08)	(- 0.60)	(2.15)	(- 1.76)
Construction	16.7*	14.6*	32.4*	8.8
	(2.46)	(2.65)	(2.50)	(0.94)
Manufacturing	0.8	0.9	1.2	3.6
	(0.14)	(0.23)	(0.12)	(0.52)
Highest year of school completed	- 3.8**	- 1.4	- 5.5**	- 1.8
	(- 2.06)	(- 1.03)	(- 2.11)	(- 0.89)
Occupational training, 1969-70	0.2	8.4**	2.9	10.9
	(0.04)	(2.15)	(0.38)	(1.46)
Vocational curriculum	- 9.6	- 6.0	9.6	- 3.9
	(- 1.54)	(- 1.11)	(1.04)	(- 0.38)
Labor market experience	- 1.7**	- 0.7	- 3.4*	- 1.1
	(- 1.94)	(- 1.01)	(- 2.64)	(- 0.95)
Tenure with 1969 employer	- 2.7**	- 4.5*	- 4.5**	- 4.0**
	(- 2.11)	(- 4.28)	(- 1.72)	(- 2.16)
Occupational information	0.4	- 0.3	- 0.8	0.7
	(1.11)	(- 1.13)	(- 1.63)	(1.33)
No health limitation, 1969	5.1	-12.7**	- 2.3	-20.8
	(0.60)	(- 2.19)	(- 0.20)	(- 1.34)
Residence in South, 1969	- 5.4	- 5.4	-12.2	- 4.3
	(- 0.90)	(- 1.33)	(- 1.48)	(- 0.46)
Residence in large city, 1969	5.4	9.6**	1.5	- 2.6
	(1.16)	(2.12)	(0.19)	(- 0.29)
Constant	76.9*	68.5*	125.7*	79.6*
	(3.22)	(3.94)	(3.96)	(2.65)
$\bar{R}^2$	0.08	0.10	0.18	0.04
F ratio	3.68	5.01	3.58	1.72
Total number of respondents	387	475	156	247
Mean of dependent variable	27.1	22.2	27.0	37.1

a Respondents 17 to 27 years of age not enrolled in school and employed as blue collar wage and salary workers in 1969 and 1970.

b For a complete description of the variables and units of measurement, see Glossary and text.

* Significant at $\alpha < .01$.

** Significant at $.01 < \alpha < .05$.

Table A-3 Regression Results: Determinants of Weeks Unemployed between 1969 and 1970 Surveys, by Race and Collective Bargaining Coverage[a]

(t-ratios in parentheses)

Explanatory variables[b]	WHITES		BLACKS	
	Union	Nonunion	Union	Nonunion
Craftsmen	- 2.5**	0.3	0.8	- 2.0
	(- 2.18)	(0.33)	(0.29)	(- 1.03)
Operatives	- 2.8*	0.1	3.9*	- 1.6
	(- 2.67)	(0.16)	(2.05)	(- 1.12)
Construction	2.4**	1.3	2.1	2.7
	(.2.22)	(1.51)	(0.79)	(1.46)
Manufacturing	1.1	0.7	0.9	1.1
	(1.23)	(1.03)	(0.42)	(0.80)
Highest year of school completed	- 0.6**	- 0.7*	0.0	- 0.4
	(- 1.97)	(- 3.21)	(0.05)	(- 1.01)
Occupational training, 1969-70	- 0.6	1.2	- 0.3	0.0
	(- 0.73)	(1.96)	(- 0.17)	(- 0.03)
Vocational curriculum	- 1.8**	- 0.3	0.8	- 0.7
	(- 1.75)	(- 0.31)	(0.41)	(- 0.36)
Labor market experience	- 0.3**	- 0.2**	- 0.4	- 0.5**
	(- 2.01)	(- 1.94)	(- 1.49)	(- 2.10)
Tenure with 1969 employer	- 0.4**	- 0.4**	- 0.7	0.3
	(- 1.80)	(- 2.16)	(- 1.31)	(0.92)
Occupational information	0.1	0.0	- 0.3*	0.1
	(1.67)	(0.07)	(- 2.52)	(0.87)
No health limitation, 1969	1.9	- 1.8**	- 0.4	- 2.6
	(1.43)	(- 1.91)	(- 0.15)	(- 0.83)
Residence in South, 1969	- 0.5	- 1.2	- 3.0	- 1.3
	(- 0.47)	(- 1.79)	(- 1.74)	(- 0.70)
Residence in large city, 1969	0.3	1.3	0.0	- 0.5
	(0.47)	(1.82)	(0.02)	(- 0.30)
Constant	8.5**	12.2*	12.7**	13.7*
	(2.22)	(4.36)	(1.93)	(2.29)
$\bar{R}^2$	0.06	0.05	0.11	0.00
F ratio	3.02	2.82	2.52	0.79
Total number of respondents	387	475	156	247
Mean of dependent variable	3.0	2.0	3.8	4.7

a Respondents 17 to 27 years of age not enrolled in school and employed as blue collar wage and salary workers in 1969 and 1970.

b For a complete description of the variables and units of measurement, see Glossary and text.

* Significant at $\alpha < .01$.

** Significant at $.01 < \alpha < .05$.

Table A-4 Regression Results: Determinants of Usual Hours Worked per Week on 1969 Job, by Race and Collective Bargaining Coverage[a]

(t-ratios in parentheses)

Explanatory variables[b]	WHITES		BLACKS	
	Union	Nonunion	Union	Nonunion
Craftsmen	1.1	3.7*	- 2.3	- 0.2
	(1.21)	(2.92)	(- 1.38)	(- 0.13)
Operatives	2.0*	4.7*	- 1.1	2.1
	(2.53)	(3.68)	(- 0.91)	(1.49)
Construction	- 0.2	- 1.2	- 0.4	1.7
	(- 0.25)	(- 1.00)	(- 0.25)	(0.97)
Manufacturing	- 0.6	- 1.8**	2.9**	2.9**
	(- 0.85)	(- 1.98)	(2.11)	(2.23)
Highest year of school completed	0.5**	0.1	- 0.1	0.6
	(2.15)	(0.17)	(- 0.35)	(1.45)
Occupational training, prior to 1969	- 1.6*	- 1.0	3.6*	- 3.2**
	(- 2.78)	(- 1.13)	(3.62)	(- 2.29)
Vocational curriculum	0.4	1.6	- 3.3*	- 0.3
	(0.49)	(1.30)	(- 2.66)	(- 0.14)
Labor market experience	0.3*	0.3**	0.0	0.4**
	(3.09)	(2.09)	(- 0.05)	(2.05)
Tenure with 1969 employer	0.2	- 0.3	- 0.1	- 0.6
	(1.63)	(- 1.31)	(- 0.20)	(- 1.72)
Occupational information	0.0	0.1	0.0	- 0.2
	(- 0.16)	(1.38)	(- 0.57)	(- 2.35)
No health limitation, 1969	- 0.6	2.7**	3.1**	1.4
	(- 0.54)	(2.13)	(2.00)	(0.48)
Residence in South, 1969	0.4	0.9	1.3	6.0*
	(0.51)	(1.04)	(1.13)	(3.44)
Residence in large city, 1969	- 0.8	0.5	0.2	3.2**
	(- 1.42)	(0.46)	(0.17)	(1.96)
Constant	34.7*	33.0*	39.4*	31.4*
	(12.14)	(8.51)	(9.17)	(5.57)
$\bar{R}^2$	0.05	0.04	0.10	0.11
F ratio	2.68	2.63	2.37	3.40
Total number of respondents	387	475	156	247
Mean of dependent variable	41.8	43.3	42.2	42.2

a Respondents 17 to 27 years of age not enrolled in school and employed as blue collar wage and salary workers in 1969.

b For a complete description of the variables and units of measurement, see Glossary and text.

* Significant at $\alpha < .01$.

** Significant at $.01 < \alpha < .05$.

Table A-5 Regression Results: Determinants of Percent Change in Average Hourly Earnings 1969-1970, by Race and Collective Bargaining Coverage[a]

(t-ratios in parentheses)

Explanatory variables[b]	WHITES		BLACKS	
	Union	Nonunion	Union	Nonunion
Craftsmen	10.4**	0.9	17.6**	- 2.0
	(2.01)	(0.18)	(1.87)	(- 0.29)
Operatives	7.0	1.4	2.0	1.0
	(1.50)	(0.26)	(0.29)	(0.17)
Construction	9.4	2.5	13.0	-14.9**
	(1.81)	(0.49)	(1.19)	(- 2.08)
Manufacturing	- 9.0**	- 2.4	- 3.3	-22.5*
	(- 2.41)	(- 0.66)	(- 0.44)	(- 4.57)
Highest year of school completed	- 2.1	2.6**	1.8	- 0.7
	(- 1.54)	(1.91)	(0.83)	(- 0.46)
Occupational training, 1969-70	- 0.7	3.3	- 2.0	- 0.9
	(- 0.20)	(0.95)	(- 0.34)	(- 0.16)
Vocational curriculum	7.7	- 2.6	9.5	- 7.2
	(1.80)	(- 0.34)	(1.30)	(- 0.84)
Labor market experience	0.0	0.4	0.9	- 1.5
	(0.04)	(0.65)	(0.88)	(- 1.75)
Tenure with 1969 employer	1.0	0.9	- 0.1	- 0.9
	(1.14)	(1.00)	(- 0.07)	(- 0.71)
Occupational information	0.6*	0.6**	0.1	0.6**
	(2.39)	(2.30)	(0.22)	(1.67)
No health limitation, 1969	- 0.3	10.0	13.4	22.8**
	(- 0.05)	(1.84)	(1.25)	(2.09)
Residence in South, 1969	0.0	2.0	-23.4*	-21.4*
	(0.01)	(0.56)	(- 3.34)	(- 3.02)
Residence in large city, 1969	- 0.2	2.6	7.1	-14.3**
	(- 0.07)	(0.61)	(1.08)	(- 2.17)
Average hourly earnings on 1969 job	-11.6*	-12.6*	-23.0*	-14.1*
	(- 6.27)	(- 6.68)	(- 5.44)	(- 3.42)
Constant	48.7*	- 15.0	39.7	61.2*
	(2.75)	(- 0.89)	(1.53)	(2.61)
$\bar{R}^2$	.11	.10	.16	.19
F ratio	3.78	4.20	2.63	3.99
Total number of respondents	322	385	122	181
Mean of dependent variable	9.2	14.3	9.1	15.2

a Respondents not enrolled in school and employed as blue collar wage and salary workers in 1969 and 1970.

b For a complete description of the variables and units of measurement, see Glossary and text.

* Significant at $\alpha < .01$.

** Significant at $.01 < \alpha < .05$.

APPENDIX B

BIBLIOGRAPHY

Ashenfelter, O. "Discrimination and Trade Unions," in O. Ashenfelter and A. Rees (eds.) Discrimination in Labor Markets. Princeton: Princeton University Press, 1973.

_____. "Racial Discrimination and Trade Unionism." Journal of Political Economy 80 (May/June 1972, Part 1):435-464.

Ashenfelter, O., and Johnson, G. E. "Unionism, Relative Wages, and Labor Quality in U.S. Manufacturing Industries." International Economic Review 13 (October 1972):488-508.

Blinder, A.S. "Estimating a Micro Wage Equation: Pitfalls and Some Provisional Estimates." Research memorandum no. 131, Princeton Econometric Research Program. Princeton University, 1971.

Boskin, W.J. "Unions and Relative Real Wages." American Economic Review 62 (June 1972):466-472.

Bureau of Labor Statistics. Selected Earnings and Demographic Characteristics of Union Members, 1970. Report no. 417, U.S. Department of Labor. Washington: U.S. Government Printing Office, 1972.

Chow, G.C. "Tests of Equality between Sets of Coefficients in Two Linear Regressions." Econometrica 28 (July 1960):591-605.

Ehrenberg, R.G. "Municipal Government Structure, Unionization, and the Wages of Fire Fighters." Industrial and Labor Relations Review 27 (October 1973):36-48.

Estey, M. "Wage Changes Under Collective Bargaining, 1969, 1970." Wharton Quarterly 4 (Spring 1970):17-20.

Fogel, W., and Lewin, D. "Wage Determination in the Public Sector." Industrial and Labor Relations Review 27 (April 1974):410-431.

Freund, J.L. "Market and Union Influences on Municipal Employee Wages." Industrial and Labor Relations Review 27 (April 1974): 391-404.

Hill, R.C. "Unionization and Racial Income Inequality in the Metropolis." American Sociological Review 39 (August 1974): 507-522.

Johnson, G.E., and Youmans, K.C. "Union Relative Wage Effects by Age and Education." Industrial and Labor Relations Review 24 (January 1971):171-179.

Kohen, A.I. Determinants of Early Labor Market Success Among Young Men: Race, Ability, Quantity and Quality of Schooling. Columbus: Center for Human Resource Research, The Ohio State University, 1973.

Kohen, A.I. and Breinich, S.C. "Knowledge of the World of Work: A Test of Occupational Information for Young Men." Journal of Vocational Behavior 6 (1975):133-144.

Lewis, H.G. "The Effects of Unions on Industrial Wage Differentials." In Aspects of Labor Economics. New York: National Bureau of Economic Research, Inc., 1962.

_____. Unionism and Relative Wages in the United States. Chicago: University of Chicago Press, 1963.

Northrup, H.R. "Construction Labor Crisis." Wharton Quarterly 4 (Winter 1969):25-28.

Oaxaca, R. "Sex Discrimination in Wages," in O. Ashenfelter and A. Rees (eds.) Discrimination in Labor Markets. Princeton: Princeton University Press, 1973.

O'Hanlon, T. "The Case Against Unions," in John A. Delehanty (ed.) Manpower Problems and Policies: Full Employment and Opportunity for All. Scranton, Pennsylvania: International Textbook Company, 1969.

Parnes, H.S. and Kohen, A.I. "Occupational Information and Labor Market Experience: The Case of Young Men." Journal of Human Resources 10 (Winter 1975):44-55.

Parnes, H.S.; Nestel, G.; and Andrisani, P. The Pre-Retirement Years, vol. 3. Columbus: Center for Human Resource Research, The Ohio State University, 1972.

Raimon, R.L. and Stoikov, V. "The Effects of Blue-collar Unionism on White-collar Earnings." Industrial and Labor Relations Review 22 (April 1969):358-374.

Rees, A. The Economics of Trade Unionism. Chicago: University of Chicago Press, 1962.

Reynolds, L. "The Balance Sheet of Trade Unionism," in Labor Economics and Industrial Relations. Englewood Cliffs, N.J.: Prentice-Hall, 1970, Chapter 24.

Rosen, S. "Trade Union Power, Threat Effects and Extent of Organization." Review of Economic Studies 36 (April 1969):185-196.

_____. "Unionism and the Occupational Wage Structure in the U.S." International Economic Review 11 (June 1970):269-286.

Ryscavage, P.M. "Measuring Union-Nonunion Earnings Differences." Monthly Labor Review 97 (December 1974):3-9.

Sheppard, H. and Herrick, N. Where Have All the Robots Gone? Worker Dissatisfaction in the 70's. New York: The Free Press, 1972.

Stafford, F.P. "Concentration and Labor Earnings: Comment." American Economic Review 58 (March 1968):174-180.

Throop, A.W. "The Union-Nonunion Wage Differential and Cost-Push Inflation." American Economic Review 58 (March 1968):79-99.

Weiss, L. "Concentration and Labor Earnings." American Economic Review 56 (March 1966):96-117.

Work in America, Report of a Special Task Force to the Secretary of HEW. Cambridge, Mass.: MIT Press, 1972.

APPENDIX C

GLOSSARY

AGE

Age of respondent as of last birthday prior to April 1, 1970.

"ANNUAL" EARNINGS

The sum of wages, salaries, commissions and tips (before deduction) earned by the respondent during the 12-month period prior to the survey.

ATTRITION RATE

The attrition rate between year x and year y is the proportion of respondents interviewed in year x who were not reinterviewed, for whatever reason, in year y. The "noninterview rate" between year x and year y is the proportion of respondents in year x who were not interviewed in year y for reasons other than entry into the armed forces.

AVERAGE HOURLY EARNINGS: See HOURLY RATE OF PAY

CLASS OF WORKER

Wage and Salary Worker

A person working for a rate of pay per time-unit, commission, tips, payment in kind, or piece rates for a private employer or any government unit.

Self-employed Worker

A person working in his own unincorporated business, profession, or trade, or operating a farm for profit or fees.

Unpaid Family Worker

A person working without pay on a farm or in a business operated by a member of the household to whom he is related by blood or marriage.

COLOR

In this report the term "blacks" refers only to Negroes; "whites" refers to Caucasians. Thus, there is a difference in terminology between this report and the first two volumes of this series in which "blacks" referred to the group now referred to in U.S. Government reports as "Negro and other races."

EDUCATIONAL ATTAINMENT: See HIGHEST YEAR OF SCHOOL COMPLETED

EMPLOYED: See LABOR FORCE AND EMPLOYMENT STATUS

HEALTH

A binary variable assigned the value "1" if the respondent reported no work limiting health condition in 1970 or if a reported condition was of a shorter duration than one year, and the value "0" otherwise.

HIGHEST YEAR OF SCHOOL COMPLETED

The highest year finished by the respondent in "regular" school, where years of school completed are denoted in integer units (e.g., a high school graduate who did not enter college is coded as 12).

HOURLY RATE OF PAY

Compensation--in dollars--for work performed. This is limited to wage and salary workers because it is virtually impossible to ascertain to what extent the earnings of the self-employed are wages as opposed to other kinds of returns. If a time unit other than an hour was reported, hourly rates were computed by first converting the reported figure into a weekly rate and then dividing by the number of hours usually worked per week.

INDUSTRY

There are 12 one-digit-level classes of the Bureau of the Census' functional classification of employers on the basis of nature of final product. In this study, binary variables were used to distinguish, on the one hand, the construction industry from all others, and on the other hand, manufacturing industries from all others.

JOB

A continuous period of service with a given employer.

Current (or Last) Job

For those respondents who were employed during the survey week: the job held during the survey week. For those respondents who were either unemployed or out of the labor force: the most recent job.

KNOWLEDGE OF THE WORLD OF WORK: See OCCUPATIONAL INFORMATION TEST

LABOR FORCE AND EMPLOYMENT STATUS

In the Labor Force

All respondents who were either employed or unemployed during the survey week.

Employed

All respondents who during the survey week were either (1) "at work"--those who did any work for pay or profit or worked without pay for 15 hours or more on a family farm or business; or (2) "with a job but not at work"--those who did not work and were not looking for work, but had a job or business from which they were temporarily absent because of vacation, illness, industrial dispute, bad weather, or because they were taking time off for various other reasons.

Unemployed

All respondents who did not work at all during the survey week and (1) either were looking or had looked for a job in the four-week period prior to the survey; (2) were waiting to be recalled to a job from which they were laid off; or (3) were waiting to report to a new job within 30 days.

Out of the Labor Force

All respondents who were neither employed nor unemployed during the survey week.

LABOR MARKET EXPERIENCE

The total number of years between the time the respondent left school and 1969. For the purpose of this study the variable was computed as (AGE-EDUCATIONAL ATTAINMENT-5), and thus it actually is "potential" experience since it abstracts from discontinuities in formal schooling and from military service subsequent to schooling.

LARGE CITY

A binary variable denoting the size of the population in the area in which the respondent resided in 1969. The variable was assigned the value "1" if the area had a (1960) labor force containing at least 300,000 persons which corresponds approximately to areas with populations of 500,000 or more.

NONUNIONIZED: See UNIONIZED .

OCCUPATION

The ten occupation groups are the ten one-digit classes used by the Bureau of the Census in the 1960 Census. The four types of occupation are white collar (professional and technical workers; managers, officials, and proprietors; clerical workers; and sales workers); blue collar (craftsmen and foremen, operatives, and nonfarm laborers); service; and farm (farmers, farm managers, and farm laborers).

OCCUPATIONAL INFORMATION TEST (measured in 1966 survey only)

A series of questions designed to measure the extent of the respondent's information about the labor market. First, the respondent is asked to choose one of several job descriptions that best matches each of 10 specified job titles. Second, he is asked to indicate the amount of regular schooling typically achieved by men in each of the occupations. Third, he chooses from a pair of occupations the one in which he thinks average annual earnings is higher. For scoring procedures see Kohen and Breinich, "Knowledge of the World of Work."

OCCUPATIONAL TRAINING OUTSIDE SCHOOL

Program(s) taken outside the regular school system for other than social or recreational purposes. Sponsoring agents include government, unions, and business enterprises. A training course sponsored by a company must last at least six weeks to be considered a "program."

PSU (PRIMARY SAMPLING UNIT)

One of the 235 areas of the country from which the sample for this study was drawn; usually an SMSA (standard metropolitan statistical area) or a county.

SATISFACTION WITH JOB, LEVEL OF

Respondent's report of his feelings toward his job when confronted with the following four alternatives: "like it very much, like it fairly well, dislike it somewhat, dislike it very much." When used as a binary variable, the first response is characterized as "highly satisfied" in distinction to all of the others.

SELF-EMPLOYED: See CLASS OF WORKERS

SOCIOECONOMIC STATUS OF OCCUPATION

An index devised by Duncan which assigns a two-digit status score to each three-digit occupational category in the Census classification scheme. For details see O. D. Duncan, "A Socioeconomic Index for All Occupations," in A. J. Reiss Jr., et al., Occupations and Social Status (New York: Free Press of Glencoe, 1961).

SOUTH

A binary variable characterizing the Census region of residence of the respondent in 1969. It was assigned the value "1" if the respondent lived in the District of Columbia or one of the following states: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma or Texas.

SURVEY WEEK

For convenience, the term "survey week" is used to denote the calendar week preceding the date of interview. In the conventional terminology of the Bureau of the Census, it means "reference week."

TENURE

The total number of years spent by the respondent in the job in which he was employed during the 1969 (or 1970) survey week.

TRAINING: See OCCUPATIONAL TRAINING

UNEMPLOYED: See LABOR FORCE AND EMPLOYMENT STATUS

UNEMPLOYMENT

Rate

The proportion of the labor force classified as unemployed.

Spell of

A continuous period of unemployment of at least one week's duration.

Weeks of

Number of weeks during which the respondent reported that he was looking for work or on lay-off from a job.

UNIONIZED

As used in this study, the term refers to a worker whose wages (salary) were set by a collective bargaining agreement. It does not refer exclusively to workers who were members of the union or employee association that participated in reaching the collectively bargained agreement.

UNPAID FAMILY WORKER: See CLASS OF WORKER

VOCATIONAL TRAINING OUTSIDE SCHOOL: See OCCUPATIONAL TRAINING OUTSIDE SCHOOL

WAGE AND SALARY WORKERS: See CLASS OF WORKER

WAGE RATE: See HOURLY RATE OF PAY

WEEKS IN LABOR FORCE

Cumulative number of weeks that the respondent reported that he was either working, looking for work, or on lay-off from a job.

APPENDIX D

ATTRITION FROM THE SAMPLE

Of the 5,225 members of the sample interviewed in 1966, 3,993 were reinterviewed in 1970. The sample has thus diminished by about one-fourth (22 percent of the whites and 28 percent of the blacks) (Table D-1).[1,2] As has been noted in previous reports, this proportion considerably overstates the error involved in using the sample to represent the national civilian population of men 18 to 28 years of age in 1970 because about half of the noninterviewees had entered the armed forces.[3] About 4 percent of the initial sample refused (by 1970) to continue their participation in the survey, another 3 percent could not be located by Census interviewers, and an additional 4 percent were not interviewed for other reasons.[4]

As has been indicated in earlier volumes, the likelihood of dropping out of the sample for each of the several reasons mentioned above varies systematically according to a number of characteristics of the young men. Irrespective of color, young men who were students in 1966 were more likely than those out of school to have dropped from

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[1]In this report the term "blacks" refers exclusively to Negroes; "whites" refers to Caucasians. This terminology is the same as that used in the third and fourth volumes in the series, but different from that used in the first two volumes, in which "blacks" referred to the group now shown in U.S. Government reports as "Negro and other races."

[2]This report departs from the format of earlier volumes by displaying only sample sizes, rather than population estimates. With the exception of the attrition discussion, all analyses have been performed by applying the appropriate population weight to each sample case.

[3]On the other hand, the national civilian population of men 18 to 28 in 1970 includes some men who were not surveyed in the initial sample, namely those who were 14 to 24 and in the armed forces in 1966.

[4]These reasons include temporary absence from the home, institutionalization, and death.

Table D-1 Interview Status 1970 by Interview Status 1967-1969 and Color: All Respondents in the Initial (1966) Sample[a]

Interview status 1970 and 1967-69	WHITES		BLACKS	
	Percent of total	Percent of subtotal	Percent of total	Percent of subtotal
Interviewed 1970	78	100	72	100
Interviewed last in 1969	73	92	63	88
Interviewed last in 1968	2	3	4	5
Interviewed last in 1967	2	3	3	5
Interviewed last in 1966	1	2	1	2
Not interviewed 1970	22	100	28	100
Interviewed last in 1969	6	27	9	32
Interviewed last in 1968	6	29	9	30
Interviewed last in 1967	6	26	7	23
Interviewed last in 1966	4	17	4	15
Total percent	100	---	100	---
Total number of respondents	3,734	---	1,438	---

a The total sample in 1966 consisted of 5,225 men 14 to 24 years of age. This table excludes 53 respondents who are classified as neither white nor black (e.g., Chinese Americans, American Indians).

the sample as of 1970. This is a function of the aging of the sample and the consequently greater eligibility for entrance to the armed forces of those who were students in 1966. Among 1966 students the attrition rate due to entrance into the armed forces was about four-and-one-half times the corresponding rate for 1966 nonstudents (Table D-2). In general, blacks have had a higher net rate of attrition from the sample than whites, despite the fact that blacks have exhibited a higher return-to-the-sample rate. As has been pointed out in previous volumes, this intercolor difference is not due to a different rate of entrance to military service, but to a higher rate of "disappearance" among blacks than among whites.

A detailed breakdown of the net attrition rate by selected demographic characteristics is presented in Tables D-2 and D-3. Above-average net attrition rates characterized the youngest (i.e., under 18) members of the sample, principally because of their susceptibility to the military draft. Among black respondents attrition has been particularly pronounced among youth residing outside of the South at the initial interview. Between the fourth (1969) and fifth (1970) surveys, attrition was disproportionately high among young men who left school between the third and fourth surveys and among those who changed county (SMSA) of residence between 1968 and 1969.

Several aspects of the gross changes in the sample over time are also noteworthy, because the net attrition rates do not reveal the entire picture of changes in the sample's size and composition. For example, more than 9 percent of those interviewed in 1970 had been noninterviewees in 1969 (Table D-1). In fact, over 5 percent of those interviewed in 1970 were not interviewed in either of the preceding surveys (i.e., 1968 and 1969). This phenomenon of recovering temporary absentees has grown, as we anticipated.[5] As can be seen from Table D-4, the decline in net year-to-year attrition has been produced principally by a steady increase in the proportion and number of respondents returning to the sample. These figures attest both to the diligence and expertise of the Census interviewers and to the cooperativeness of the respondents. Stated in somewhat different terms these facts are even more striking. Of the young men who were not interviewed in 1969 but were "eligible"[6] for interview in 1970, more than four-fifths were

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[5] See Kohen, Career Thresholds, vol. 4, p. 5.

[6] For purposes of this discussion, those eligible for interview in 1970 were respondents who, in 1970, were in the civilian noninstitutional population and who had not been dropped from the sample due to (1) a refusal to participate previously or (2) two consecutive (nonmilitary) noninterviews previously.

Table D-2 Attrition Rate between 1966 and 1970 by Reason and Selected Characteristics of Respondents, 1966

1966 Characteristic	Total number of sample cases, 1966	Noninterview rate			Armed forces	Total attrition rate
		Refusal	Unable to locate	Total[a]		
All respondents						
White	3,734	4	2	9	12	22
Black	1,438	4	6	16	13	28
Enrolled in school						
White	2,334	4	1	8	17	25
Black	834	4	5	13	19	32
Not enrolled in school						
White	1,400	6	3	12	4	16
Black	604	4	7	19	4	24
Student, 14-17 years old						
White	1,625	4	2	8	18	25
Black	708	4	5	13	19	32
Student, 18-19 years old						
White	383	3	b	6	22	29
Black	87	3	3	9	21	30
Student, 20-24 years old						
White	326	4	1	8	11	19
Black	39	5	3	10	15	26
Student, living in South						
White	674	3	2	7	18	26
Black	597	1	5	10	19	29
Student, living in non-South						
White	1,660	4	1	8	17	25
Black	237	10	5	20	17	38
Nonstudent, 14-17 years old						
White	162	6	4	16	16	31
Black	124	6	9	28	9	37
Nonstudent, 18-19 years old						
White	294	3	2	11	8	19
Black	144	4	5	14	10	24
Nonstudent, 20-24 years old						
White	944	6	2	12	1	13
Black	336	4	7	18	1	19
Nonstudent, living in South						
White	459	6	4	13	4	17
Black	411	2	5	14	5	20
Nonstudent, living in non-South						
White	941	5	2	12	4	16
Black	193	9	10	30	3	33

a Total includes some respondents who were not interviewed for other reasons including temporary absence, institutionalization and death.

b Between 0.1 and 0.5 percent.

Table D-3 Attrition Rate between 1969 and 1970 by Reason and Selected Characteristics of Respondents, 1969

1969 Characteristic	Total number of sample cases, 1969	Noninterview rate			Armed forces	Total attrition rate
		Refusal	Unable to locate	Total[a]		
All respondents						
White	3,933	1	2	3	4	8
Black	1,057	1	5	7	5	13
Student 1968 and 1969						
White	973	b	1	2	5	8
Black	259	1	2	4	5	9
Student 1968, nonstudent 1969						
White	354	1	2	2	13	16
Black	147	0	5	6	14	20
Nonstudent 1968 and 1969						
White	1,380	1	2	3	2	5
Black	565	1	6	8	2	11
Married, 1968 and 1969						
White	628	1	1	2	0	2
Black	131	2	5	8	0	8
Never married, 1969						
White	1,674	1	2	4	7	11
Black	717	1	5	7	7	14
Never married 1968, married 1969						
White	537	b	1	2	2	4
Black	169	1	2	5	4	8
Migrant 1968-1969						
White	275	0	3	4	6	10
Black	74	0	15	16	7	23
Nonmigrant 1968-1969						
White	2,652	1	1	3	4	7
Black	982	1	4	6	5	11
Student 1969, nonmigrant 1968-1969						
White	1,006	1	1	3	5	8
Black	268	2	2	4	5	9
Nonstudent 1969, migrant 1968-1969						
White	192	0	4	4	6	10
Black	63	0	18	19	8	27
Nonstudent 1969, nonmigrant 1968-1969						
White	1,646	1	2	3	4	7
Black	714	1	5	7	5	12

a Total includes some respondents who were not interviewed for other reasons including temporary absence, institutionalization and death.

b Between 0.1 and 0.5 percent.

Table D-4 Gross and Net Changes in Sample Size, by Race and Survey Year

Survey year and interview status	Total number of respondents	Percent of initial sample
	WHITES	
Interviewed 1966, not interviewed 1967	305	8.2
Interviewed 1967, not interviewed 1968	359	9.6
Not interviewed 1967, interviewed 1968	47	1.3
Net attrition 1967-1968	312	8.3
Interviewed 1968, not interviewed 1969	322	8.6
Not interviewed 1968, interviewed 1969	138	3.7
Net attrition 1968-1969	184	4.9
Interviewed 1969, not interviewed 1970	222	5.9
Not interviewed 1969, interviewed 1970	212	5.7
Net attrition 1969-1970	10	0.2
Net attrition 1966-1970	811	21.7
	BLACKS	
Interviewed 1966, not interviewed 1967	125	8.7
Interviewed 1967, not interviewed 1968	176	12.2
Not interviewed 1967, interviewed 1968	26	1.8
Net attrition 1967-1968	150	10.4
Interviewed 1968, not interviewed 1969	177	12.3
Not interviewed 1968, interviewed 1969	71	4.9
Net attrition 1968-1969	106	7.4
Interviewed 1969, not interviewed 1970	129	9.0
Not interviewed 1969, interviewed 1970	103	7.2
Net attrition 1969-1970	26	1.8
Net attrition 1966-1970	407	28.3

actually interviewed and this proportion rises to nine-tenths when one focuses on those who were in the armed forces in 1969.

Finally, it is of interest to note that some changes in the sample's composition as a result of selective attrition actually are smaller than they would have been in the absence of respondents returning to the sample. First, black respondents have had a higher return-to-the-sample rate than whites, partially offsetting the higher gross attrition among blacks. Second, as suggested above, many of the returnees are young men who entered military service subsequent to the initial interview, and entrance to the military during this period is closely related to several important demographic characteristics. For example, while net attrition has been above average among respondents 18 and 19 years of age in 1966, their return rate also has been disproportionately high.

APPENDIX E

SAMPLING, INTERVIEWING AND ESTIMATING PROCEDURES

The Survey of Work Experience of Young Men is one of four longitudinal surveys sponsored by the Manpower Administration of the U.S. Department of Labor. Taken together these surveys comprise the National Longitudinal Surveys.

The 1970 survey was the fifth of a series of six annual interviews conducted for the Survey of Work Experience of Young Men. The respondents were between the ages of 14 and 24 at the time of the first interview conducted in 1966; thus, the age range in 1970 was 18 to 28.

The Sample Design

The National Longitudinal Surveys are based on a multi-stage probability sample located in 235 sample areas comprising 485 counties and independent cities representing every state and the District of Columbia. The 235 sample areas were selected by grouping all of the nation's counties and independent cities into about 1,900 primary sampling units (PSU's) and further forming 235 strata of one or more PSU's that are relatively homogeneous according to socioeconomic characteristics. Within each of the strata a single PSU was selected by chance to represent the stratum. Within each PSU a probability sample of housing units was selected to represent the civilian noninstitutionalized population.

Since one of the survey requirements was to provide separate reliable statistics for Negroes and other races, households in predominantly Negro and other race enumeration districts (ED's) were selected at a rate three times that for households in predominantly white ED's. The sample was designed to provide approximately 5,000 interviews for each of the four surveys--about 1,500 Negroes and other races and 3,500 whites. When this requirement was examined in light of the expected number of persons in each age-sex color group it was found that approximately 42,000 households would be required in order to find the requisite number of Negroes and other races in each age-sex group.

An initial sample of about 42,000 housing units was selected and a screening interview took place in March and April 1966. Of this number about 7,500 units were found to be vacant, occupied by persons whose usual residence was elsewhere, changed from residential use, or demolished. On the other hand, about 900 additional units were found which had been created within existing living space or had been changed from what was

previously nonresidential space. Thus, 35,360 housing units were available for interview; of these, usable information was collected for 34,622 households, a completion rate of 98.0 percent.

The original plan called for using this initial screening to select the sample for all sample groups. On reflection it was decided to rescreen the sample in the fall of 1966 prior to the first interview of males 14 to 24. Males in the upper part of that age group are the most mobile group in the entire population and a seven-month delay between the initial screening and the first interview seemed to invite problems.

To increase efficiency, it was decided to stratify the sample for the rescreening by the presence or absence of a 14- to 24-year-old male in the household. The probability is great that a household which contained a 14- to 24-year-old in March will also have one in September. However, we had to insure that the sample also represented persons who had moved into sample households in the intervening period, so that a sample of addresses which had no 14- to 24-year-old males was also included in the screening operation.

This phase of the screening began in early September 1966. Since a telephone number had been recorded for most households at the time of the initial interview, every attempt was made to complete the short screening interview by telephone.

Following this screening operation, 5,704 males age 14 to 24 were designated to be interviewed for the Survey of Work Experience. These were sampled differentially within four strata: whites in white ED's (i.e., ED's which contained predominantly white households), Negroes and other races in white ED's, whites in Negro and other races ED's, and Negroes and other races in Negro and other races ED's.

The Field Work

Three hundred and twenty-five interviewers were assigned to this panel. Many of the procedures and the labor force and socioeconomic concepts used in this survey were identical or similar to those used in the Current Population Survey (CPS); all the interviewers selected to work on this survey had CPS experience and most of them (92.3 percent) had also worked on at least one of the earlier panels of the National Longitudinal Surveys. Consequently, the quality of the interviewing staff was high and at the same time, the time and costs required for training were reduced.

Interviewer training consisted of a home study, consisting of a set of exercises covering the procedures and concepts explained in the reference manual, which was reviewed by a survey supervisor. In addition, those interviewers who had no previous experience with the longitudinal surveys attended one day of classroom training conducted by a supervisor.

The supervisor was provided with a "verbatim" training guide which included lecture material and a number of structured practice interviews which were designed to familiarize the interviewers with the questionnaire. All training materials were prepared by the Bureau staff and reviewed by the Manpower Administration and the Center for Human Resource Research of The Ohio State University. Three hundred and twenty-five interviewers were trained in 22 training sessions held around the country. Professional staff members of the participating organizations observed the training sessions, and later, the actual interviewing.

Interviewing began October 19, 1970 and continued until early January. Completion of the field work was delayed for several reasons--the interviewers had to devote about one week a month to CPS, and a number of the interviewers had other surveys for which they were responsible. However, there were several other significant factors which affected the interviewer's ability to complete her assignment on time:

1. At least a year had passed since the respondent was last contacted and the listed addresses were obsolete for a number of the respondents. Therefore, a great deal of time was spent in locating respondents.

2. Most of the respondents were of draft age and some of them were in the armed forces, about to go in or had already completed their tour of duty and had been discharged.

3. Many respondents were attending school and/or working; thus, there were only certain times of the day that the respondent was potentially available for interviewing.

A preliminary edit to check the quality of the completed questionnaires was done by the Data Collection Center staffs. This consisted of a "full edit" of each questionnaire returned by each interviewer. The editor reviewed the questionnaires from beginning to end to determine if the entries were complete and consistent and whether the skip instructions were being followed.

The interviewer was contacted by phone concerning minor problems and, depending on the nature of the problem, was either merely told of her error and asked to contact the respondent for further information or for clarification, or, for more serious problems, was retrained, either totally or in part, and the questionnaire was returned to her for completion.

Estimating Methods

The estimation procedure implemented for this survey in 1966 was a multi-stage ratio estimate. The first step was the assignment to each sample case of a basic weight which took into account the over-representation of the Negro and other race strata, the rescreening

procedure, and the sampling fraction of the stratum from which it was selected. The sample drawn from the white stratum was selected at an eight-out-of-nine ratio, while the selection for the sample for the Negro and other race stratum was a seven-out-of-eight ratio. Thus, from the Survey of Work Experience of Young Men, there were four different base weights reflecting the differential sampling by color within stratum (i.e., white ED's) during both the rescreening and selection operations.

1. Noninterview Adjustment

The weights for all interviewed persons were adjusted to the extent needed to account for persons for whom no information was obtained because of absence, refusals, or unavailability for other reasons. This adjustment was made separately for each of 24 groupings: Census region of residence (Northeast, North Central, South, West), by residence (urban, rural farm, rural nonfarm), by color (white, Negro and other races).

2. Ratio Estimates

The distribution of the population selected for the sample may differ somewhat, by chance, from that of the nation as a whole, in such characteristics as age, color, sex, and residence. Since these population characteristics are closely correlated with the principal measurements made from the sample, the latter estimates can be substantially improved when weighted appropriately by the known distribution of these population characteristics.[1] This was accomplished through two stages of ratio estimation, as follows:

a. First-Stage Ratio Estimation

This is a procedure in which the sample proportions were adjusted to the known 1960 Census data on the color-residence distribution of the population. This step took into account the differences existing at the time of the 1960 Census between the color-residence distribution for the nation and for the sample areas.

b. Second-Stage Ratio Estimation

In this final step, the sample proportions were adjusted to independent current estimates of the civilian noninstitutional

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[1] See U.S. Bureau of the Census, Technical Paper No. 7, "The Current Population Survey--A Report on Methodology" (Washington, D.C., 1963), for a more detailed explanation of the preparation of estimates.

population by age and color. These estimates were prepared by carrying forward the most recent Census data (1960) to take account of subsequent aging of the population, mortality, and migration between the United States and other countries.[2] The adjustment was made by color within five age groupings: 14 to 15, 16 to 17, 18 to 19, 20 to 21, and 22 to 24.

After this step, each sample person has a weight which remains unchanged throughout the five-year life of the survey. The universe of study was thus fixed at the time of interview for the first cycle. No reweighting of the sample is made after subsequent cycles since the group of interviewed persons is an unbiased sample of the population group (in this case, civilian noninstitutionalized males age 14 to 24) in existence at the time of the first cycle only.

Coding and Editing

Most of the data could be punched directly from the questionnaire, since many of the answers were numerical entries or in the form of precoded categories. However, the Bureau's standard occupation and industry codes which are used in the monthly CPS were also used for the job description questions and these codes are assigned clerically. In addition, the answers for all the "open-end" questions had to be clerically coded, using categories which were previously developed in conjunction with the Center for Human Resource Research from hand tallies of a subsample of completed questionnaires.

The consistency edits for the questionnaire were completed on the computer. A modification of the CPS edit was used for the parts of the questionnaire which were similar to CPS; separate consistency checks were performed for all the other sections. None of the edits included an allocation routine which was dependent on averages or random information from outside sources, since such allocated data could not be expected to be consistent with data from subsequent surveys. However, where the answer to a question was obvious from others in the questionnaire, the missing answer was assigned to the item on the tape. For example, if item 14b ("Do you have a scholarship, fellowship, assistantship, or other type of financial aid this year?") was blank, but legitimate entries appeared in 14c and d ("What kind?" and "How much is it per year?") a "Yes" was inserted in 14b. In this case, only if 14b was marked "Yes," could 14 c-d be filled; therefore, the assumption was made that either the key punch operator failed to punch the item or the interviewer failed to mark it.

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[2] See U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 352, November 18, 1966, for a description of the methods used in preparing these independent population estimates.

Further, some of the status codes which depend on the answers to a number of different items were completed using only partial information. For example, the current employment status of the respondent (that is, whether he was employed, unemployed, or not in the labor force) is determined by the answers to a number of related questions. However, if one or more of these questions is not completed but the majority are filled and consistent with each other, the status is determined on the basis of the available answers. This procedure accounts for an artifically low count of "NA's" for certain items.

APPENDIX F

1970 INTERVIEW SCHEDULE

NOTICE – Your report to the Census Bureau is confidential by law (Title 13, U.S. Code). It may be seen only by sworn Census employees and may be used only for statistical purposes.

FORM L GT-241
(7-27-70)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

NATIONAL LONGITUDINAL SURVEYS
SURVEY OF WORK EXPERIENCE OF YOUNG MEN

1970

METHODS OF LOCATING RESPONDENT WHO HAS MOVED

	Successful	Unsuccessful	
002	1 ☐	2 ☐	New occupants . . . . .
003	1 ☐	2 ☐	Neighbors . . . . .
004	1 ☐	2 ☐	Apartment house manager . . . . .
005	1 ☐	2 ☐	Post office . . . . .
006	1 ☐	2 ☐	School . . . . .
007	1 ☐	2 ☐	Persons listed on information sheet .
008	1 ☐	2 ☐	Other – *Specify* _____

RECORD OF CALLS

Date	Time	Comments
	a.m. / p.m.	
	a.m. / p.m.	
	a.m. / p.m.	
	a.m. / p.m.	

RECORD OF INTERVIEW

Date completed (Month / Day / Year)	Interview time: Began	Interview time: Ended	Interviewed by
009	a.m. / p.m.	a.m. / p.m.	

Length of interview (minutes) 010 ☐☐

NONINTERVIEW REASON

011
- ☐ Unable to contact respondent – *Specify* _____
- 6 ☐ Temporarily absent – *Give return date* _____
- 7 ☐ Armed Forces – *Specify release date* _____
- 8 ☐ Institutionalized – *Specify type* _____
- 9 ☐ Refused
- 0 ☐ Deceased
- A ☐ Other – *Specify* _____

TRANSCRIPTION FROM HOUSEHOLD RECORD CARD

Item 13 – Marital status of respondent

012
- 1 ☐ Married, spouse present
- 2 ☐ Married, spouse absent
- 3 ☐ Widowed
- 4 ☐ Divorced
- 5 ☐ Separated
- 6 ☐ Never married

013 / 014 *If respondent has moved, enter new address*

1. Number and street

015	2. City	3. County	4. State	5. ZIP code

I. EDUCATIONAL STATUS

1. Are you attending or enrolled in regular school? — 1.

(016) 1 ☐ Yes – *ASK 2a*
2 ☐ No – 7

When were you last enrolled?

(017) _____ Month _____ Year – *SKIP to Check Item B*

2a. What grade are you attending? — 2a.

(018) 1 Elementary 1 2 3 4 5 6 7 8
2 High school 1 2 3 4
3 College 1 2 3 4 5 6+

b. Are you enrolled as a full-time or part-time student? — b.

(019) 1 ☐ Full-time
2 ☐ Part-time

CHECK ITEM A

Refer to item 94R on Information Sheet
☐ Respondent not in school in 1969 – *ASK 3a*
☐ Respondent in school in 1969 – *SKIP to Check Item C*

CHECK ITEM B

Refer to item 94R on Information Sheet
☐ Respondent in school in 1969 – *SKIP to Check Item F, page 3*
☐ All others – *SKIP to 22a, page 5*

3a. At this time last year, you were not enrolled in school. How long had you been out of school before returning? — 3a.

(020) _____ Years

b. Why did you return? — b. (021) ☐

c. In what curriculum are you enrolled? — c. (022) ☐☐

_____

SKIP to 5

CHECK ITEM C

Refer to items 2a and 94R on Information Sheet
☐ Respondent in high school in 1969, college now – *SKIP to 5*
☐ Other – *ASK 4*

4. Are you attending the same school as you were at this time last year? — 4.

(023) 1 ☐ Yes – *SKIP to 13*
2 ☐ No – *ASK 5*

5. What is the name of the school you now attend? — 5.

6. Where is this school located? — 6. (024) ☐☐

_____ City
_____ County
_____ State

7. Is this school public or private? — 7.

(025) 1 ☐ Public
2 ☐ Private

8. When did you enter this school? — 8.

(026) _____ Month _____ Year

CHECK ITEM D

Refer to item 2a or item 94R on Information Sheet
☐ Respondent in college I now – *SKIP to 14a*
☐ Respondent in high school I now
☐ Respondent not in school in 1969
} *SKIP to 22a, page 5*
☐ Other – *ASK 9*

9. Why did you change schools? — 9. (027) ☐

10. Would you say you now like school more, about the same, or less than you did last year? — 10.

(028) 1 ☐ More
2 ☐ Less
3 ☐ About the same

I. EDUCATIONAL STATUS – Continued

11. Are you enrolled in the same curriculum now as you were last year? — 11. (029)
- ☐ Yes
- 1 ☐ College – *SKIP to 14a*
- 2 ☐ High school
- 3 ☐ Elementary
  SKIP to 22a, page 5
- 4 ☐ No – *ASK 12*

12. In what curriculum are you enrolled now? — 12. (030) ☐☐

13. How did you happen to change your curriculum? — 13. (031) ☐

☐ Respondent not now in college – *SKIP to Check Item E*

14a. How much is the full-time tuition this year at the college you attend? — 14a. (032) $ _____

b. Do you have a scholarship, fellowship, assistantship, or other type of financial aid this year? — b. (033)
- 1 ☐ Yes – *ASK c*
- 2 ☐ No – *SKIP to Check Item E*

c. What kind? — c. (034)
- 1 ☐ Scholarship
- 2 ☐ Fellowship
- 3 ☐ Assistantship
- 4 ☐ Loan
- 5 ☐ Other – *Specify* _____

d. How much is it per year? — d. (035) $ _____

CHECK ITEM E

Refer to item 94R on Information Sheet
- ☐ Respondent in college 3–6 in 1969 – *ASK 15a*
- ☐ Other – *SKIP to 22a, page 5*

15a. Have you received a degree since last year at this time? — 15a. (036)
- 1 ☐ Yes – *ASK b*
- 2 ☐ No – *SKIP to 22a, page 5*

b. What degree was it? — b. (037)
- 1 ☐ Bachelor's (B.A., B.S., A.B.)
- 2 ☐ Master's (M.S., M.B., M.B.A.)
- 3 ☐ Doctor's (Ph.D.)
- 4 ☐ Other – *Specify* _____

c. In what field did you receive your degree? — c. (038) ☐☐

d. Why did you decide to continue your education after receiving this degree? — d. (039) ☐

SKIP to 22a, page 5

CHECK ITEM F

Refer to item 94R on Information Sheet
- ☐ Respondent in high school 1–3 last year – *ASK 16a*
- ☐ Respondent in high school 4 last year – *SKIP to 17a*
- ☐ Respondent in college 1–3 last year – *SKIP to 19a*
- ☐ Respondent in college 4+ last year – *SKIP to 20a*
- ☐ Respondent in elementary school last year – *ASK 16a*

16a. At this time last year, you were attending your _____ year of high school. Did you complete that year? — 16a. (040)
- 1 ☐ Yes
- 2 ☐ No

b. Why did you drop out of high school? — b. (041) ☐

c. Do you expect to return? — c. (042)
- 1 ☐ Yes – *ASK d*
- 2 ☐ No – *SKIP to 24, page 5*

d. When do you expect to return? — d. (043)
- 1 ☐ This school year
- 2 ☐ Next school year
- 3 ☐ Don't know
- 4 ☐ Other _____

SKIP to 22a, page 5

1. EDUCATIONAL STATUS – Continued

17a. Did you graduate from high school? 17a.

(044) 1 ☐ Yes – *SKIP to Check Item G*
2 ☐ No – *ASK b*

b. Why not? b. (045) ☐

CHECK ITEM G — *Refer to item 95R on Information Sheet*

(046) 1 ☐ Respondent had planned to enter college when last interviewed – *ASK 18a*
2 ☐ Respondent had not planned to enter college when last interviewed – *SKIP to 22a, page 5*
3 ☐ Respondent not asked about educational goal – *SKIP to 22a, page 5*

18a. When we last interviewed you, you said you planned to go to college. Have your plans changed? 18a.

(047) 1 ☐ Yes – *ASK b*
2 ☐ No – *SKIP to c*

b. What caused your plans to change? b.

(048) 1 ☐ Poor grades, lacked ability, wasn't accepted because of low grades, etc.
2 ☐ Economic reasons (couldn't afford, had to work instead, unable to obtain financial assistance)
3 ☐ Disliked school, lost interest, had enough school
4 ☐ Military service
5 ☐ Personal health reasons
6 ☐ Other – *Specify* _____

SKIP to d

c. Why are you presently not enrolled in college? c.

(049) 1 ☐ Economic reasons (couldn't afford, have to work, unable to obtain financial assistance, etc.)
2 ☐ Was rejected or turned down
3 ☐ Waiting to be accepted by a school
4 ☐ Military service
5 ☐ Personal health reasons
6 ☐ Other – *Specify* _____

d. When do you plan to enroll in college? d.

(050) _____ Month _____ Year – *SKIP to 22a*
X ☐ Don't plan to enroll – *SKIP to 24*

19a. Last year at this time you were in college. Why did you decide to drop out? 19a.

(051) ☐
_____
X ☐ Received degree – *SKIP to 21a*

b. Do you expect to return? b.

(052) 1 ☐ Yes – *ASK c*
2 ☐ No – *SKIP to 24*

c. When do you think you will return? c.

(053) 1 ☐ This school year
2 ☐ Next school year
3 ☐ Don't know
4 ☐ Other

SKIP to 22a

20a. Last year at this time you were in college. Did you receive a degree? 20a.

(054) 1 ☐ Yes – *SKIP to 21a*
2 ☐ No – *ASK b*

b. Why did you decide to drop out? b. (055) ☐

c. Do you expect to return? c.

(056) 1 ☐ Yes – *ASK d*
2 ☐ No – *SKIP to 24*

d. When? d.

(057) 1 ☐ This school year
2 ☐ Next school year
3 ☐ Don't know
4 ☐ Other

SKIP to 22a

I. EDUCATIONAL STATUS – Continued

21a. What degree did you receive? — 21a. (358)
1 ☐ Associate (2 year course)
2 ☐ Bachelor's (B.A., B.S., A.B.)
3 ☐ Master's (M.S., M.B., M.B.A.)
4 ☐ Doctor's (Ph.D.)
5 ☐ Other – *Specify* _____

b. In what field of study did you receive your degree? — b. (359) ☐☐

22a. How much education would you like to get? — 22a. (360)
If "Other," Specify _____
_____
High school: 1 ☐ 1 yr. 2 ☐ 2 yrs. 3 ☐ 3 yrs. 4 ☐ 4 yrs.
College: 5 ☐ 2 yrs. (complete junior college) 6 ☐ 4 yrs. (graduate from 4-year college) 7 ☐ 6 yrs. (master's degree or equivalent) 8 ☐ 7 + yrs. (Ph.D. or professional degree)
Other: 0 ☐ None, don't know, other responses

b. As things stand now how much education do you think you will actually get? — b. (361)
If "Other," *Specify* _____
_____
High school: 1 ☐ 1 yr. 2 ☐ 2 yrs. 3 ☐ 3 yrs. 4 ☐ 4 yrs.
College: 5 ☐ 2 yrs. (complete junior college) 6 ☐ 4 yrs. (graduate from 4-year college) 7 ☐ 6 yrs. (master's degree or equivalent) 8 ☐ 7 + yrs. (Ph.D. or professional degree)
Other: 0 ☐ None, don't know, other responses

CHECK ITEM N
Refer to item 22a and item 95R on Information Sheet
☐ Educational goal different from when last interviewed – *ASK 23*
☐ Educational goal same as when last interviewed / ☐ Respondent not asked about educational goal } *SKIP to 24*

23. When we last interviewed you, you said you would like to get (amount of education indicated in 95R) Why have you changed your plans? — 23. (362) ☐

24. How much encouragement has your father given you to continue your education beyond high school? — 24. (363)
1 ☐ Much
2 ☐ Some
3 ☐ None
4 ☐ Does not live with father

25. How much encouragement has your mother given you to continue your education beyond high school? — 25. (364)
1 ☐ Much
2 ☐ Some
3 ☐ None
4 ☐ Does not live with mother

26. How much help in continuing your schooling after high school do you expect to get (have you received) from your parents? — 26. (365)
1 ☐ Much
2 ☐ Some
3 ☐ None

27. How much encouragement have (did) your teachers and other adults in your high school given (give) you to continue your education beyond high school? — 27. (366)
1 ☐ Much
2 ☐ Some
3 ☐ None

28. How many of your friends plan to go to college or are actually attending college? — 28. (367)
1 ☐ Many of them
2 ☐ Some of them
3 ☐ Few or none of them

Notes

1. EDUCATIONAL STATUS – Continued

☐ Respondent now attends school – *SKIP to Check Item 1*

29a. Since this time last year have you taken any training courses or educational programs of any kind, either on the job or elsewhere?

29a. (948) 1 ☐ Yes – *ASK b*
2 ☐ No – *SKIP to Check Item 1*

b. What kind of training or education program did you take? *(Specify below, then mark one box)*

_____

_____

b. (949) 1 ☐ Professional, technical
2 ☐ Managerial
3 ☐ Clerical
4 ☐ Skilled manual
5 ☐ Other

c. Where did you take this training course? *(Specify below, then mark one box)*

_____

_____

c. (950) 1 ☐ Business college, technical institute
2 ☐ Company training school
3 ☐ Correspondence course
4 ☐ Regular school
5 ☐ Other

d. How long did you attend this course or program?

d. (951) _____ Months
99 ☐ Still attending

e. How many hours per week did you spend on this training?

e. (952) 1 ☐ 1–4
2 ☐ 5–9
3 ☐ 10–14
4 ☐ 15–19
5 ☐ 20 or more

f. Did you complete this program?

f. (953) 1 ☐ Yes – **When?**
_____ Month _____ Year – *SKIP to h*
2 ☐ No, dropped out – **When?**
_____ Month _____ Year – *ASK g*
3 ☐ No, still enrolled – *SKIP to h*

g. Why didn't you complete this program?

g. (954) 1 ☐ Found a job
2 ☐ Interfered with school
3 ☐ Too much time involved
4 ☐ Lost interest
5 ☐ Too difficult
6 ☐ Other – *Specify* _____

h. Why did you decide to get this training?

h. (955) 1 ☐ To obtain work
2 ☐ To improve current job situation
3 ☐ To get better job than present one
4 ☐ Wanted to continue education
5 ☐ Need it; worthwhile
6 ☐ Other – *Specify* _____

i. Do you use this training on your present job?

i. (956) 1 ☐ Yes
2 ☐ No
3 ☐ Not employed

CHECK ITEM 1

☐ Respondent a college graduate (Item 94R or item 2 equals college 4+) – *ASK 30a*

☐ Respondent not a college graduate (Item 94R or item 2 does not equal college 4+) – *SKIP to 31*

Notes

I. EDUCATIONAL STATUS – Continued

30a. Prior to October of 1967, did you take any training courses or educational programs of any kind, either on the job or elsewhere? — 30a. (077)
1 ☐ Yes – *ASK b*
2 ☐ No – *SKIP to 31a*

b. What kind of training or education program did you take? *(Specify below, then mark one box)*
_____
_____
b. (078)
1 ☐ Professional, technical
2 ☐ Managerial
3 ☐ Clerical
4 ☐ Skilled manual
5 ☐ Other

c. Where did you take this training course? *(Specify below, then mark one box)*
c. (079)
1 ☐ Business college, technical institute
2 ☐ Company training school
3 ☐ Correspondence course
4 ☐ Regular school
5 ☐ Other

d. How long did you attend this course or program?
d. (080)
_____ Months
99 ☐ Still attending

e. How many hours per week did you spend on this training?
e. (081)
1 ☐ 1–4
2 ☐ 5–9
3 ☐ 10–14
4 ☐ 15–19
5 ☐ 20 or more

f. Did you complete this program?
f. (082)
1 ☐ Yes – When?
_____ Month _____ Year – *SKIP to h*
2 ☐ No, dropped out – When?
_____ Month _____ Year – *ASK g*
3 ☐ No, still enrolled – *SKIP to h*

g. Why didn't you complete this program?
g. (083)
1 ☐ Found a job
2 ☐ Interfered with school
3 ☐ Too much time involved
4 ☐ Lost interest
5 ☐ Too difficult
6 ☐ Other – *Specify* _____

h. Why did you decide to get this training?
h. (084)
1 ☐ To obtain work
2 ☐ To improve current job situation
3 ☐ To get better job than present one
4 ☐ Wanted to continue education
5 ☐ Need it; worthwhile
6 ☐ Other – *Specify* _____

i. Do you use this training on your present job?
i. (085)
1 ☐ Yes
2 ☐ No
3 ☐ Not employed

Notes

(086)
(087)
(088)

II. CURRENT LABOR FORCE STATUS

31. **What were you doing most of LAST WEEK – working, going to school, or something else?**

(089)
1 ☐ WK – Working – *SKIP to 32b*
2 ☐ J – With a job but not at work
3 ☐ LK – Looking for work
4 ☐ S – Going to school
5 ☐ U – Unable to work – *SKIP to 35*
6 ☐ OT – Other – *Specify* →

32a. **Did you do any work at all LAST WEEK, not counting work around the house?**

(092) 1 ☐ Yes 2 ☐ No – *SKIP to 33a*

b. **How many hours did you work LAST WEEK at all jobs?**

(093) _____ Hours

CHECK ITEM J

Respondent worked –

☐ 49 hours or more – *SKIP to 36a and enter job worked at last week*

☐ 1–34 hours – *ASK c*

☐ 35–48 hours – *ASK d*

32c. **Do you USUALLY work 35 hours or more a week at this job?**

(094)
1 ☐ Yes – **What is the reason you worked less than 35 hours LAST WEEK?**
2 ☐ No – **What is the reason you USUALLY work less than 35 hours a week?**

(Mark the appropriate reason)

(095)
1 ☐ Slack work
2 ☐ Material shortage
3 ☐ Plant or machine repair
4 ☐ New job started during week
5 ☐ Job terminated during week
6 ☐ Could find only part-time work
7 ☐ Labor dispute
8 ☐ Did not want full-time work
9 ☐ Full-time work week under 35 hours
10 ☐ Attends school
11 ☐ Holiday (legal or religious)
12 ☐ Bad weather
13 ☐ Own illness
14 ☐ On vacation
15 ☐ Too busy with housework, personal business, etc.
16 ☐ Other – *Specify* →

(SKIP to 36a and enter job worked at least week)

32d. **Did you lose any time or take any time off LAST WEEK for any reason such as illness, holiday, or slack work?**

☐ Yes – **How many hours did you take off?**

(096) _____ Hours

9 ☐ No – *GO to 32e*

NOTE: Correct item 32b if lost time not already deducted; if item 32b is reduced below 35 hours, ask item c, otherwise SKIP to 36a.

e. **Did you work any overtime or at more than one job LAST WEEK?**

☐ Yes – **How many extra hours did you work?**

(097) _____ Hours

0 ☐ No

NOTE: Correct item 32b if extra hours not already included and SKIP to 36a.

(If "J" in 31, SKIP to b)

33a. **Did you have a job (or business) from which you were temporarily absent or on layoff LAST WEEK?**

(098) 1 ☐ Yes
2 ☐ No – *ASK 34a*

b. **Why were you absent from work LAST WEEK?**

(099)
1 ☐ Own illness
2 ☐ On vacation
3 ☐ Bad weather
4 ☐ Labor dispute
5 ☐ New job to begin within 30 days } *ASK 34c and 34d(2)*
6 ☐ Temporary layoff (less than 30 days)
7 ☐ Indefinite layoff (30 days or more or no definite recall date) } *ASK 34d(3)*
8 ☐ School interfered
9 ☐ Other – *Specify* →

c. **Are you getting wages or salary for any of the time off LAST WEEK?**

(100) 1 ☐ Yes
2 ☐ No
3 ☐ Self-employed

d. **Do you usually work 35 hours or more a week at this job?**

(101) 1 ☐ Yes
2 ☐ No

(GO to 36a and enter job held last week)

Notes

II. CURRENT LABOR FORCE STATUS – Continued

(If "LK" in 31, ASK b)

34a. **Have you been looking for work during the past 4 weeks?**

(100) 1 ☐ Yes — 2 ☐ No – *SKIP to 35*

b. **What have you been doing in the last 4 weeks to find work?**

(Mark all methods used; do not read list)

(101) 0 ☐ Nothing – *SKIP to 35*

Checked with:
- 1 ☐ State employment agency
- 2 ☐ Private employment agency
- 3 ☐ Employer directly
- 4 ☐ Friends or relatives

5 ☐ Placed or answered ads

6 ☐ School employment service

7 ☐ Other – *Specify – e.g., MDTA, union or professional register, etc.*

c. **Why did you start looking for work? Was it because you lost or quit a job at that time** *(pause)* **or was there some other reason?**

(102)
1 ☐ Lost job
2 ☐ Quit job
3 ☐ Left school
4 ☐ Wanted temporary work
5 ☐ Enjoy working
6 ☐ Help with family expenses
7 ☐ Other – *Specify*

d. (1) **How many weeks have you been looking for work?**

(2) **How many weeks ago did you start looking for work?**

(3) **How many weeks ago were you laid off?**

(103) _____ Weeks

e. **Have you been looking for full-time or part-time work?**

(104) 1 ☐ Full-time
2 ☐ Part-time

f. **Is there any reason why you could not take a job LAST WEEK?**

(105) Yes →
- 1 ☐ Needed at home
- 2 ☐ Temporary illness
- 3 ☐ Going to school
- 4 ☐ Other – *Specify*

5 ☐ No

g. **When did you last work at a regular job or business lasting two consecutive weeks or more, either full-time or part-time?**

☐ October 1, 1969 or later –

Specify

(106) Month | Day | Year – *SKIP to 41a*

3 ☐ All others – *SKIP to 42a*

35. **When did you last work at a regular job or business, lasting two consecutive weeks or more, either full-time or part-time?**

☐ October 1, 1969 or later –

Specify

(107) Month | Day | Year – *SKIP to 41a*

2 ☐ Before October 1, 1969 and "unable" now and "unable" in item 96R on the Information Sheet – *SKIP to 71a, page 18*

3 ☐ All others – *SKIP to 42a*

DESCRIPTION OF JOB OR BUSINESS

36a. **Do you have more than one job?**

(108) 1 ☐ Yes – *Record information about primary job only*
2 ☐ No

(109) ☐

b. **For whom did you work?** *(Name of company, business, organization, or other employer)*

(110) ☐☐

c. **In what city and State is . . . located?**

_____ City _____ State

(111) ☐☐☐

d. **What kind of business or industry is this?** *(For example: TV and radio manufacturer, retail shoe store, State Labor Department, farm)*

e. **Were you –**

(112)
10 ☐ P – **An employee of a PRIVATE company, business, or individual for wages, salary, or commissions?**
20 ☐ G – **A GOVERNMENT employee (Federal, State, county, or local)?**
30 ☐ O – **Self-employed in your OWN business, professional practice, or farm?**
(If not a farm)
Is this business incorporated?
31 ☐ Yes 32 ☐ No
40 ☐ WP – **Working WITHOUT PAY in family business or farm?**

(113) ☐☐☐

f. **What kind of work were you doing?** *(For example: car salesman, high school English teacher, stock clerk)*

g. **What were your most important activities or duties?** *(For example: selling clothing, keeping account books, teaching mathematics, finishing concrete)*

h. **What was your job title?**

i. **When did you start working for (ENTRY IN 36b)?**

☐ October 1, 1969 or later – *Specify*

(114) Month | Day | Year

2 ☐ Before October 1, 1969

II. CURRENT LABOR FORCE STATUS – Continued

CHECK ITEM K

☐ "P" or "G" in item 36e – *ASK 37a*
☐ "O" or "WP" in item 36e – *SKIP to 38a*

37a. Altogether, how much do you usually earn at this job before deductions? — 37a.

(115) $ _____ (Dollars) . _____ (Cents) per: →

(116) 1 ☐ Hour

(117) $ _____ (Dollars only) per: →

(118)
2 ☐ Day
3 ☐ Week
4 ☐ Biweekly
5 ☐ Month
6 ☐ Year
7 ☐ Other – *Specify* _____

b. How many hours per week do you usually work at this job? — b.

(119) _____ Hours

c. Do you receive extra pay when you work over a certain number of hours? — c.

(120)
1 ☐ Yes – *ASK d*
2 ☐ No
3 ☐ No, but received compensating time off } *SKIP to f*
4 ☐ Never work overtime

d. After how many hours do you receive extra pay? — d.

(121) _____ Hours per day

(122) _____ Hours per week

e. For all hours worked over *(entry in d)* are you paid straight time, time and one-half, double time or what? — e.

(123)
1 ☐ Compensating time off
2 ☐ Straight time
3 ☐ Time and one-half
4 ☐ Double time
5 ☐ Other – *Specify* _____

f. Are your wages (salary) on this job set by a collective bargaining agreement between your employer and a union or employee association? — f.

(124)
1 ☐ Yes – *ASK g*
2 ☐ No – *SKIP to 38a*

g. What is the name of the union or employee association? — g.

(125) ☐

_____

h. Are you a member of that union or employee association? — h.

(126)
1 ☐ Yes
2 ☐ No

38a. Before you began to work as a *(entry in 36f)* for *(entry in 36b)*, did you do any other kind of work for *(entry in 36b)*? — 38a.

(127)
1 ☐ Yes – *SKIP TO 39a*
2 ☐ No

b. Excluding vacations and paid sick leave, during the time you have worked at this job, were there any full weeks in which you didn't work (since October 1, 1969)? — b.

☐ Yes – **How many weeks?**

(128) _____ Weeks

0 ☐ No – *SKIP to Check Item L*

c. Why were you not working during these _____ weeks? — c.

(129)
1 ☐ School
2 ☐ Personal, family reasons
3 ☐ Own illness
4 ☐ Layoff
5 ☐ Labor dispute
6 ☐ Did not want to work
7 ☐ Other

Notes

077

II. CURRENT LABOR FORCE STATUS – Continued

CHECK ITEM L

Refer to item 36i

☐ Current job started before October 1, 1969 – *SKIP to Check Item S*

☐ Current job started October 1, 1969 or later – *SKIP to 40*

39a. When did you start working as a *(entry in 36f)* for *(entry in 36b)*? — 39a. (130) Month | Day | Year

b. Excluding vacations and paid sick leave, during the time you have worked as a *(entry in 36f)* for *(entry in 36b)*, were there any full weeks in which you didn't work, (since October 1, 1969)? — b. (131)

☐ Yes – How many weeks? _____ Weeks

0 ☐ No – *SKIP to Check Item M*

c. Why were you not working during these _____ weeks? — c. (132)

1 ☐ School
2 ☐ Personal, family reasons
3 ☐ Own illness
4 ☐ Layoff
5 ☐ Labor dispute
6 ☐ Did not want to work
7 ☐ Other

CHECK ITEM M

☐ Item 39a is earlier than October 1, 1969 – *SKIP to Check Item S*

☐ Item 39a is October 1, 1969 or later – *ASK 40*

40. Just before you started on this job, was there a period of a week or more in which you were not working? — 40. (133)

1 ☐ Yes – *SKIP to 52*
2 ☐ No – *SKIP to 43a*

41a. You said you last worked at a regular job on *(entry in 34g or 35)*.

(Interviewer: Use calendar to determine the number of weeks since respondent last worked.) — 41a. (1) (134) _____ Weeks since last worked

That would be about _____ weeks since you last worked. In how many of these weeks were you looking for work or on layoff from a job? — (2) (135) _____ Weeks looking or on layoff

CHECK ITEM N

☐ 41a(1) is equal to 41a(2) – *SKIP to 43*

☐ 41a(1) is greater than 41a(2) – *ASK b*

41b. That leaves _____ weeks that you were not working or looking for work. What would you say was the main reason you were not looking for work during that period? — 41b. (136) _____ Weeks (137)

1 ☐ Personal, family reasons
2 ☐ Ill or disabled, unable to work
3 ☐ In school
4 ☐ Couldn't find work
5 ☐ Vacation
6 ☐ Did not want to work
7 ☐ Other – *Specify* _____

SKIP to 43

42a. Since October 1, 1969 have you spent any weeks looking for work or on layoff from a job? — 42a. (138)

☐ Yes – How many weeks? _____ Weeks

0 ☐ No

CHECK ITEM O

Interviewer: Use calendar to determine the number of weeks since October 1, 1969.

(1) (139) _____ Weeks since last worked, after October 1, 1969

(2) (140) _____ Weeks on layoff or looking for work

☐ (1) is equal to (2) – *SKIP to Check Item S*

☐ (1) is greater than (2) – *ASK b*

42b. What would you say was the main reason you were not looking for work during (the rest of) that time? — 42b. (141)

1 ☐ Personal, family reasons
2 ☐ Ill or disabled, unable to work
3 ☐ In school
4 ☐ Couldn't find work
5 ☐ Vacation
6 ☐ Did not want to work
7 ☐ Other – *Specify* _____

SKIP to Check Item S

Notes

(142)
(143)
(144)

III. WORK EXPERIENCE AND ATTITUDES

			(1)
43. Now let's talk about –	The job you worked at before you started to work as a (ENTRY IN 36f OR 43a) for (ENTRY IN 36b OR 43a)	43a.	(143) ☐ Same as 36b – *SKIP to 43e*
	The last job you worked at; that is, the one which ended on (ENTRY IN 34g OR 35)		
a. For whom did you work? (Name of company, business, organization or other employer)		b.	(146)
b. In what city and State is . . . located?			(147) City, State
c. What kind of business or industry is this? *(For example: TV and radio manufacturer, retail shoe store, State Labor Department, farm)*		c.	
d. Class of worker.		d.	(148) 1 ☐ P 2 ☐ G 3 ☐ O 4 ☐ WP
e. What kind of work were you doing? *(For example: stock clerk, high school English teacher, car salesman)*		e.	(149)
f. What were your most important activities or duties? *(For example: selling clothing, keeping account books, teaching mathematics, finishing concrete)*		f.	
g. What was your job title?		g.	
44a. Altogether, how much did you usually earn at this job before all deductions?		44a.	(150) $ _____
			(151) ☐ per _____
b. How many hours per week did you usually work at this job?		b.	(152) _____ Hours
45a. When did you start working as a (ENTRY IN 43a) for (ENTRY IN 43a)?		45a.	(153) Month | Day | Year
b. When did you stop working as a (ENTRY IN 43a) for (ENTRY IN 43a)?		b.	(154) Month | Day | Year; X ☐ Still working there – *SKIP to 47a*
46a. Why did you happen to leave this job (change the kind of work you were doing)?		46a.	(155)
b. Did you have a new job lined up before you left this one?		b.	(156) 1 ☐ Yes 2 ☐ No
47a. Excluding vacations, during the time you worked at this job were there any full weeks in which you didn't work on this job (since October 1, 1969)?		47a.	☐ Yes – How many weeks?
			(157) _____ Weeks – *ASK b*
			0 ☐ No – *SKIP to 48*
b. Why were you not working during these . . . weeks at this job?		b.	(158) 1 ☐ Layoff 5 ☐ Own illness 2 ☐ Labor dispute 3 ☐ In school 6 ☐ Did not want to work 4 ☐ Personal family reasons 7 ☐ Other
c. Were you working for someone else during this period(s)?		c.	(159) 1 ☐ Yes – *GO to next column and record information about this job* 2 ☐ No
48. Did you do any other kind of work for (ENTRY IN 43a) just before (DATE IN 45a)?		48.	(160) 1 ☐ Yes – *GO to next column and record information about this job* 2 ☐ No
CHECK ITEM P	Item 45a is: 1. October 1, 1969 or later	1.	☐ – *SKIP to 50*
	2. Before October 1, 1969	2.	☐ – *ASK 49*
49. Have you worked for anyone else since October 1, 1969?		49.	(161) 1 ☐ Yes – *GO to next column and record information* 2 ☐ No – *SKIP to Check Item S*
50. While you were working for (ENTRY IN 43a), were you also working for someone else?		50.	(162) 1 ☐ Yes – *GO to next column and record information about simultaneous job* 2 ☐ No – *ASK 51*
51. JUST before you started working as a (ENTRY IN 43a) for (ENTRY IN 43a) was there a period of a week or more in which you were not working?		51.	(163) 1 ☐ Yes – *ASK 52* 2 ☐ No – *GO to next column and record information about previous job*
52. When did this period in which you were not working start?		52.	(164) Month | Day | Year; X ☐ Never worked before
53a. Interviewer: Determine number of weeks not working. If item 52 is before October 1, 1969, count only weeks since that time.		53a.	(165) _____ Weeks not working
b. That would be about . . . weeks that you were not working. How many of those weeks were you looking for work or on layoff from a job?		b.	(166) _____ Weeks looking or on layoff
CHECK ITEM Q	1. 53a is equal to 53b	1.	☐ – *SKIP to Check Item R*
	2. 53a is greater than 53b	2.	☐ – *ASK 54*
54. That leaves . . . weeks that you were not working or looking for work. What would you say was the main reason that you were not looking for work during that period?		54.	(167) 1 ☐ Ill or disabled, unable to work 5 ☐ Couldn't find work 2 ☐ In school 6 ☐ Did not want to work 3 ☐ Personal family reasons 4 ☐ Vacation 7 ☐ Other
CHECK ITEM R	1. Item 52 is October 1, 1969 or later	1.	☐ – *GO to next column and record information about previous job*
	2. Item 52 is before October 1, 1969	2.	☐ – *SKIP to Check Item S*

III. WORK EXPERIENCE AND ATTITUDES – Continued

	(2)	(3)	(4)
43a.	(168) ☐ Never worked before – *SKIP to Check Item T* ☐ Same as _____ – *SKIP to 43e*	(191) ☐ Never worked before – *SKIP to Check Item T* ☐ Same as _____ – *SKIP to 43e*	(214) ☐ Never worked before – *SKIP to Check Item T* ☐ Same as _____ – *SKIP to 43e*
b.	(169) ☐☐ City, State	(192) ☐☐ City, State	(215) ☐☐ City, State
c.	(170) ☐☐☐	(193) ☐☐☐	(216) ☐☐☐
d.	(171) 1☐ P 2☐ G 3☐ O 4☐ WP	(194) 1☐ P 2☐ G 3☐ O 4☐ WP	(217) 1☐ P 2☐ G 3☐ O 4☐ WP
e.	(172) ☐☐☐	(195) ☐☐☐	(218) ☐☐☐
f.			
g.			
44a.	(173) $ _____ (174) ☐ per _____	(196) $ _____ (197) ☐ per _____	(219) $ _____ (220) ☐ per _____
b.	(175) _____ Hours	(198) _____ Hours	(221) _____ Hours
45a.	(176) Month ☐☐ Day ☐☐ Year ☐☐	(199) Month ☐☐ Day ☐☐ Year ☐☐	(222) Month ☐☐ Day ☐☐ Year ☐☐
b.	(177) Month ☐☐ Day ☐☐ Year ☐☐ x ☐ Still working there – *SKIP to 47a*	(200) Month ☐☐ Day ☐☐ Year ☐☐ x ☐ Still working there – *SKIP to 47a*	(223) Month ☐☐ Day ☐☐ Year ☐☐ x ☐ Still working there – *SKIP to 47a*
46a.	(178) ☐☐	(201) ☐☐	(224) ☐☐
b.	(179) 1☐ Yes 2☐ No	(202) 1☐ Yes 2☐ No	(225) 1☐ Yes 2☐ No
47a.	☐ Yes – How many weeks? (180) _____ Weeks – *ASK b* 0☐ No – *SKIP to 48*	☐ Yes – How many weeks? (203) _____ Weeks – *ASK b* 0☐ No – *SKIP to 48*	☐ Yes – How many weeks? (226) _____ Weeks – *ASK b* 0☐ No – *SKIP to 48*
b.	(181) 1☐ Layoff 5☐ Own illness 2☐ Labor dispute 3☐ In school 6☐ Did not want to work 4☐ Personal family reasons 7☐ Other	(204) 1☐ Layoff 5☐ Own illness 2☐ Labor dispute 3☐ In school 6☐ Did not want to work 4☐ Personal family reasons 7☐ Other	(227) 1☐ Layoff 5☐ Own illness 2☐ Labor dispute 3☐ In school 6☐ Did not want to work 4☐ Personal family reasons 7☐ Other
c.	(182) 1☐ Yes – *GO to next column and record information about this job* 2☐ No	(205) 1☐ Yes – *GO to next column and record information about this job* 2☐ No	(228) 1☐ Yes – *GO to next column and record information about this job* 2☐ No
48.	(183) 1☐ Yes – *GO to next column and record information about this job* 2☐ No	(206) 1☐ Yes – *GO to next column and record information about this job* 2☐ No	(229) 1☐ Yes – *GO to next column and record information about this job* 2☐ No
1.	☐ – *SKIP to 50*	☐ – *SKIP to 50*	☐ – *SKIP to 50*
2.	☐ – *ASK 49*	☐ – *ASK 49*	☐ – *ASK 49*
49.	(184) 1☐ Yes – *GO to next column and record information* 2☐ No – *SKIP to Check Item S*	(207) 1☐ Yes – *GO to next column and record information* 2☐ No – *SKIP to Check Item S*	(230) 1☐ Yes – *GO to next column and record information* 2☐ No – *SKIP to Check Item S*
50.	(185) 1☐ Yes – *GO to next column and record information about simultaneous job* 2☐ No – *ASK 51*	(208) 1☐ Yes – *GO to next column and record information about simultaneous job* 2☐ No – *ASK 51*	(231) 1☐ Yes – *GO to next column and record information about simultaneous job* 2☐ No – *ASK 51*
51.	(186) 1☐ Yes – *ASK 52* 2☐ No – *GO to next column and record information about previous job*	(209) 1☐ Yes – *ASK 52* 2☐ No – *GO to next column and record information about previous job*	(232) 1☐ Yes – *ASK 52* 2☐ No – *GO to next column and record information about previous job*
52.	(187) Month ☐☐ Day ☐☐ Year ☐☐ x ☐ Never worked before	(210) Month ☐☐ Day ☐☐ Year ☐☐ x ☐ Never worked before	(233) Month ☐☐ Day ☐☐ Year ☐☐ x ☐ Never worked before
53a.	(188) _____ Weeks not working	(211) _____ Weeks not working	(234) _____ Weeks not working
b.	(189) _____ Weeks looking or on layoff	(212) _____ Weeks looking or on layoff	(235) _____ Weeks looking or on layoff
1.	☐ – *SKIP to Check Item R*	☐ – *SKIP to Check Item R*	☐ – *SKIP to Check Item R*
2.	☐ – *ASK 54*	☐ – *ASK 54*	☐ – *ASK 54*
54.	(190) 1☐ Ill or disabled, unable to work 5☐ Couldn't find work 2☐ In school 6☐ Did not want to work 3☐ Personal family reason 4☐ Vacation 7☐ Other	(213) 1☐ Ill or disabled, unable to work 5☐ Couldn't find work 2☐ In school 6☐ Did not want to work 3☐ Personal family reason 4☐ Vacation 7☐ Other	(236) 1☐ Ill or disabled, unable to work 5☐ Couldn't find work 2☐ In school 6☐ Did not want to work 3☐ Personal family reason 4☐ Vacation 7☐ Other
1.	☐ – *GO to next column and record information about previous job*	☐ – *GO to next column and record information about previous job*	☐ – *GO to next column and record information about previous job*
2.	☐ – *SKIP to Check Item S*	☐ – *SKIP to Check Item S*	☐ – *SKIP to Check Item S*

III. WORK EXPERIENCE AND ATTITUDES – Continued

CHECK ITEM S

Respondent is in –
- ☐ Labor Force Group A ("WK" or "J" in 31 or "Yes" in 32a or 33a) – *SKIP to Check Item T*
- ☐ Labor Force Group B ("LK" in 31 or "Yes" in 34a) – *SKIP to 57a*
- ☐ Labor Force Group C (All others) – *ASK 55a*

55a. Do you intend to look for work of any kind in the next 12 months? — 55a. (304)
- 1 ☐ Yes – definitely } *ASK b*
- 2 ☐ Yes – probably } *ASK b*
- ☐ Maybe – **What does it depend on?** _____ } *SKIP to 56a*
- _____ } *SKIP to 56a*
- 3 ☐ No } *SKIP to 56a*
- 4 ☐ Don't know } *SKIP to 56a*

b. When do you intend to start looking for work? — b. (307) _____ Month

c. What kind of work do you think you will look for? — c. (308) ☐☐☐

d. What will you do to find work? *(Mark as many as apply)* — d. (309)

Check with
- 1 ☐ State employment agency (or counselor)
- 2 ☐ Private employment agency
- 3 ☐ Employer directly
- 4 ☐ Friends or relatives
- 5 ☐ Placed or answered ads

- 6 ☐ School employment service
- 7 ☐ Other – *Specify* _____

56a. Why would you say that you are not looking for work at this time? — 56a. (310)
- 1 ☐ School
- 2 ☐ Personal family reasons
- 3 ☐ Health reasons
- 4 ☐ Waiting to be called into military service
- 5 ☐ Believes no work available
- 6 ☐ Does not want to work at this time of year
- 7 ☐ Other or no reason

b. If you were offered a job by some employer in THIS AREA, do you think you would take it? — b. (311)
- 1 ☐ Yes, definitely
- 2 ☐ Yes, if it is something I can do
- 3 ☐ Yes, if satisfactory wage
- 4 ☐ Yes, if satisfactory location
- 5 ☐ Yes, if other _____ } *ASK c*

- 6 ☐ No, health won't permit
- 7 ☐ No, it will interfere with school
- 8 ☐ No, parents don't want me to
- 9 ☐ No, don't need the money
- 10 ☐ No, other _____ } *SKIP to 65, page 17*

c. How many hours per week would you be willing to work? — c. (312)
- 1 ☐ 1–4
- 2 ☐ 5–14
- 3 ☐ 15–24
- 4 ☐ 25–34
- 5 ☐ 35–40
- 6 ☐ 41–48
- 7 ☐ 49 or more

d. What kind of work would it have to be? — d. (313) ☐☐☐

e. What would the wage or salary have to be? — e.

(314) $_____ (Dollars) . _____ (Cents) per: →

(315) 1 ☐ Hour

(316) $_____ (Dollars only) per: →

(317)
- 2 ☐ Day
- 3 ☐ Week
- 4 ☐ Biweekly
- 5 ☐ Month
- 6 ☐ Year
- 7 ☐ Other – *Specify* _____
- 8 ☐ Any pay

SKIP to 65, page 17

III. WORK EXPERIENCE AND ATTITUDES – Continued

57a. What type of work are you looking for? — 57a. (318) ☐☐☐

b. What would the wage or salary have to be for you to be willing to take it? — b.

(319) $ _____ . _____ per: →
(Dollars) *(Cents)*

(320) 1 ☐ Hour

(321) $ _____ per: →
(Dollars only)

(322) 2 ☐ Day
3 ☐ Week
4 ☐ Biweekly
5 ☐ Month
6 ☐ Year
7 ☐ Other – *Specify* _____
8 ☐ Any pay

c. Are there any restrictions, such as hours or location of job that would be a factor in your taking a job? — c. (323) 1 ☐ Yes – *ASK d*
2 ☐ No – *SKIP to 65, page 17*

d. What are these restrictions? — d. (324) ☐

_____

_____

SKIP to 65, page 17

CHECK ITEM T

Respondent is currently in Labor Force Group A and –
☐ Was in Labor Force Group C last year *(Item 96R on Information Sheet)* – *ASK 58*
☐ All others – *SKIP to 59*

58. At this time last year, you were not looking for work. What made you decide to take a job? — 58. (325)
1 ☐ Recovered from illness
2 ☐ Bored
3 ☐ Completed education
4 ☐ Needed money
5 ☐ Other – *Specify* _____

59. How do you feel about the job you have now? Do you like it very much, like it fairly well, dislike it somewhat, dislike it very much? — 59. (326)
1 ☐ Like it very much
2 ☐ Like it fairly well
3 ☐ Dislike it somewhat
4 ☐ Dislike it very much

60. What are the things you like best about your job? — 60. (327) ☐☐

(1) (328) ☐☐ _____

(2) (329) ☐☐ _____

(3)

61. What are the things about your job that you don't like? — 61. (330) ☐☐

(1) (331) ☐☐ _____

(2) (332) ☐☐ _____

(3)

Notes

III. WORK EXPERIENCE AND ATTITUDES – Continued

62. Suppose someone IN THIS AREA offered you a job in the same line of work you're in now. How much would the new job have to pay for you to be willing to take it?

(If amount given per hour, record dollars and cents. Otherwise, round to the nearest dollar.)

62.

(333) $ _____ . _____ per: →
(Dollars) *(Cents)*

(334) 1 ☐ Hour

(335) $ _____ per: →
(Dollars only)

(336) 2 ☐ Day
3 ☐ Week
4 ☐ Biweekly
5 ☐ Month
6 ☐ Year
7 ☐ Other – *Specify* _____

(337) 8 ☐ I wouldn't take it at any conceivable pay
9 ☐ I would take a steady job at same or less pay
10 ☐ Would accept job; don't know specific amount
11 ☐ Don't know
12 ☐ Other

CHECK ITEM U

☐ Respondent is enrolled in school this year – *SKIP to 64a*
☐ All others – *ASK 63*

63. What if this job were IN SOME OTHER PART OF THE COUNTRY – how much would it have to pay in order for you to be willing to take it?

(If amount given per hour, record dollars and cents. Otherwise, round to the nearest dollar.)

63.

(338) $ _____ . _____ per: →
(Dollars) *(Cents)*

(339) 1 ☐ Hour

(340) $ _____ per: →
(Dollars only)

(341) 2 ☐ Day
3 ☐ Week
4 ☐ Biweekly
5 ☐ Month
6 ☐ Year
7 ☐ Other – *Specify* _____

(342) 8 ☐ I wouldn't take it at any conceivable pay
9 ☐ I would take a steady job at same or less pay
10 ☐ Would accept job; don't know specific amount
11 ☐ Depends on location, cost of living
12 ☐ Don't know
13 ☐ Other

CHECK ITEM V

Refer to item 96R on the Information Sheet
☐ Respondent in Labor Force Group A in 1969 – *ASK 64a*
☐ All other – *SKIP to 65, page 17*

64a. Would you say you like your present job more, less, or about the same as (the job you held) last year?

64a.

(343) 1 ☐ More
2 ☐ Less
ASK b
3 ☐ Same – *SKIP to 65, page 17*

b. What would you say is the main reason that you like your present job (more, less)?

b. (344) ☐☐

Notes

(345)

(346)

(347)

IV. FUTURE JOB PLANS

65. Now I would like to talk to you about your future job plans. What kind of work would you like to be doing when you are 30 years old? — 65. (348) ☐☐☐

(349) 1 ☐ Same as present job
2 ☐ Don't know

CHECK ITEM W — *Refer to Item 98R on the Information Sheet*

(350) 1 ☐ Respondent's future job plans are the same as when last interviewed – *(Entries in 65 and item 98R on the Information Sheet are the same) – SKIP to Check Item X*
2 ☐ Respondent's future job plans differ from when last interviewed – *(Entries in 65 and item 98R of Information Sheet differ) – ASK 66*

66. When we last interviewed you, you said you thought that you'd like to be *(Entry in item 98R of Information Sheet)*. Why would you say you have changed your plans? — 66. (351) ☐

V. HEALTH

CHECK ITEM X
☐ Respondent is currently in school – *ASK 67a*
☐ Respondent is not currently enrolled in school – *SKIP to 67b*

67a. Do you have any health problems that limit in any way your activity in school? — 67a. (352) 1 ☐ Yes – *SKIP to 68*; 2 ☐ No – *ASK b*

b. Do you have any health problems that limit in any way the amount or kind of work you can do? — b. (353) 1 ☐ Yes – *SKIP to 68*; 2 ☐ No – *ASK c*

c. Do you have any health problems that in any way limit your other activities? — c. (354) 1 ☐ Yes – *ASK 68*; 2 ☐ No – *SKIP to 69*

68. How long have you been limited in this way? — 68. (355) _____ Years

☐ Respondent not married – *SKIP to 71a*

69a. Does your wife's health limit the amount or kind of work she can do? — 69a. (356) 1 ☐ Yes – *SKIP to 70*; 2 ☐ No – *ASK b*

b. Does your wife's health limit the amount or kind of housework she can do? — b. (357) 1 ☐ Yes – *ASK 70*; 2 ☐ No – *SKIP to 71a*

70. How long has she been limited in this way? — 70. (358) _____ Years

Notes

VI. ASSETS AND INCOME

71a. So far as your overall financial position is concerned, would you say you are better off, about the same, or worse off now than you were at this time last year? — 71a. (359) 1 ☐ Same – *SKIP to Check Item Y*; 2 ☐ Better off; 3 ☐ Worse off } *ASK b*

b. In what ways are you (better, worse) off? — b. (360) ☐

CHECK ITEM Y

☐ Respondent is NOT head of household – *SKIP to 74a*

☐ Respondent is head of household – *ASK 72a*

72a. In the last 12 months, did you (or your wife) receive financial assistance from any of your relatives? — 72a. (361) 1 ☐ Yes – *ASK b–c*; 2 ☐ No – *SKIP to item 73a*

b. From whom? — b. (362) ☐

c. How much did you receive? — c. (363) $ _____

73a. Is this house(apartment) owned or being bought by you (or your wife)? — 73a. (364) 1 ☐ Yes; 2 ☐ No – *SKIP to 74a*

b. About how much do you think this property would sell for on today's market? — b. (365) $ _____

c. About how much do you (or your wife) owe on this property for mortgages, back taxes, home improvement loans, etc? — c. (366) $ _____ ☐ None

74a. Do you (or your wife) have any money in savings or checking accounts, savings and loan companies or credit unions? — 74a. 1 ☐ Yes – How much altogether? (367) $ _____; 2 ☐ No – *GO to b*

b. Do you (or your wife) have any – (1) U.S. Savings Bonds? — b. (1) 1 ☐ Yes – What is their face value? (368) $ _____; 2 ☐ No – *GO to (2)*

(2) Stocks, bonds, or mutual funds? — (2) 1 ☐ Yes – About how much is their market value? (369) $ _____; 2 ☐ No

75a. Do YOU (or your wife) rent, own, or have an investment in a farm, business, or any other real estate? — 75a. (370) 1 ☐ Yes – *ASK b–d*; 2 ☐ No – *SKIP to 76a*

b. Which one? — b. (371) 1 ☐ Farm; 2 ☐ Business; 3 ☐ Real estate

c. About how much do you think this (business, farm, or other real estate) would sell for on today's market? — c. (372) $ _____

d. What is the total amount of debt and other liabilities on this (business, farm, or other real estate)? — d. (373) $ _____ ☐ None

76a. Do you (or your wife) own an automobile(s)? — 76a. (374) 1 ☐ Yes – *ASK b–d*; 2 ☐ No – *SKIP to 77*

b. What is (are) the make and model year? — b. (375) _____ Model year _____ Make; (376) _____ Model year _____ Make; (377) _____ Model year _____ Make

c. Do you owe any money on this (these) automobile(s)? — c. ☐ Yes – How much? (378) $ _____; (379) $ _____; (380) $ _____ ☐ No

d. How much would this (these) car(s) sell for on today's market? — d. (381) $ _____; (382) $ _____; (383) $ _____

77. Do you (or your wife) owe any (other) money to stores, banks, doctors, or anyone else, excluding 30-day charge accounts? — 77. ☐ Yes – How much? (384) $ _____ ☐ No

VII. ASSETS AND INCOME – Continued

Now I would like to ask a few questions about your income in the last 12 months.

		RESPONDENT	WIFE (Not married)
78a. How much did you (and your wife) receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else?	78a.	(383) $_____ ☐ None	(390) $_____ ☐ None
b. Did you (or your wife) receive any income from working on your own or in your own business or farm? $_____ (Gross income) less $_____ (Expenses) = $_____ (Net income)	b.	☐ Yes – How much? (384) $_____ ☐ No	☐ Yes – How much? (391) $_____ ☐ No
c. Did you (or your wife) receive any unemployment compensation?	c. (1)	☐ Yes → How many weeks? (387) _____	☐ Yes → How many weeks? (392) _____
	(2)	How much? (388) $_____ ☐ No	How much? (393) $_____ ☐ No
d. Did you (or your wife) receive any other income, such as rental income, interest or dividends, income as a result of disability or illness, etc.?	d.	☐ Yes – How much? (389) $_____ ☐ No	☐ Yes – How much? (394) $_____ ☐ No

CHECK ITEM Z

(395) 1 ☐ Respondent (and wife and children) lives alone – *SKIP to 79b*

2 ☐ *All others – ASK 79a (If two or more RELATED respondents in household, ask 79a–b only once, and transcribe answers from the first to the other questionnaires.)*

79a. In the past 12 months, what was the total income of ALL family members living here? *(Show flashcard)*	79a.	(396) 1 ☐ Under $1,000 2 ☐ $1,000–$1,999 3 ☐ 2,000– 2,999 4 ☐ 3,000– 3,999 5 ☐ 4,000– 4,999 6 ☐ 5,000– 5,999 7 ☐ 6,000– 7,499 8 ☐ 7,500– 9,999 9 ☐ 10,000–14,999 10 ☐ 15,000–24,999 11 ☐ 25,000 and over
b. Did anyone in this family receive any welfare or public assistance in the last 12 months?	b.	(397) 1 ☐ Yes 2 ☐ No

Notes

VII. FAMILY BACKGROUND

80a. How many persons not counting yourself (or your wife) are dependent upon you for at least one-half of their support? — 80a. (396) _____ Number; 0 ☐ None — *SKIP to Check Item AA*

b. Do any of these dependents live somewhere else other than here at home with you? — b. ☐ Yes — How many? (397) _____ Number — *ASK c*; 0 ☐ No — *SKIP to Check Item AA*

c. What is their relationship to you? — c. (400) ☐

CHECK ITEM AA — *Refer to name and address label on cover page* — (401) 1 ☐ Respondent lives in same area (SMSA or county) as when last interviewed — *SKIP to 83*; 2 ☐ Respondent lives in different area (SMSA or county) than when last interviewed — *ASK 81a*

81a. When we last interviewed you, you were living in *(city in address on cover page)*. How many miles from here is that? — 81a. (402) _____ Miles

b. How did you happen to move here? — b. (403) ☐

☐ Respondent currently in school — *SKIP to 82c*

82a. Did you have a job lined up here at the time you moved? — 82a. (404) 1 ☐ Yes, different from job held at time of move; 2 ☐ Yes, same as job held at time of move; 3 ☐ Yes, transferred job in same company — *SKIP to c*; 4 ☐ No — *ASK b*

b. How many weeks did you look before you found work? — b. (405) _____ Weeks; 0 ☐ Did not look for work; 99 ☐ Still haven't found work

c. Since we last interviewed you, have you lived in any area (SMSA or county) other than the present one or the one in which you lived when we interviewed you last? — c. ☐ Yes — How many? _____; 0 ☐ No (406) — *SKIP to 84a*

83. Have you lived in any area (SMSA or county) other than the present one since we last interviewed you? — 83. ☐ Yes — How many? _____; 0 ☐ No (407)

84a. What is your present draft classification? — 84a. (408) ☐☐ _____; 0 ☐ Respondent is under 18 — *SKIP to 85*

b. *(If 1-Y or 4-F)* Why were you rejected? — b. (409) 1 ☐ Failed both physical and written test; 2 ☐ Failed physical test; 3 ☐ Failed written test; 4 ☐ Not accepted for other reasons; 9 ☐ Don't know reason

85. How many rooms are there in this house or apartment? Do not count bathrooms, porches, balconies, foyers, halls, or half rooms. — 85. (410) _____ Rooms

Notes (411) (412) (413)

NOTES

Now I have a few questions about the education and work experience of the other family members living here.

Line number	Name List below all persons living here who are related to respondent. *Enter line number from the Household Record Card in Column 86a.*	Relationship to respondent Example: wife, son, daughter-in-law, brother, etc.	Age *As of October 1, 1970*	Persons 6–24 years old: Is . . . attending or enrolled in school? Circle Y – Yes N – No	Persons 6–24 years old: If "Yes" – What grade (year)? If "No" – What is the highest grade (year) . . . ever attended?	Persons 6–24 years old: Did . . . finish this grade (year)?	Persons 14 years old and over: In the past 12 months how many weeks did . . . work either full- or part-time (not, counting work around the house)?	Persons 14 years old and over: If person worked at all in the past 12 months – In the weeks that . . . worked, how many hours did . . . usually work per week?	Persons 14 years old and over: If person worked at all in the past 12 months – What kind of work was . . . doing in the past 12 months? *If more than one, record the longest.*
86a	86b	86c	86d	87	88	89	90	91	92
		(614) Respondent							
		(615)		(616) Y N		Y N	(617)		(618)
		(619)		(620) Y N		Y N	(621)		(622)
		(623)		(624) Y N		Y N	(625)		(626)
		(627)		(628) Y N		Y N	(629)		(630)
		(631)		(632) Y N		Y N	(633)		(634)
		(635)		(636) Y N		Y N	(637)		(638)
		(639)		(640) Y N		Y N	(641)		(642)
		(643)		(644) Y N		Y N	(645)		(646)
		(647)		(648) Y N		Y N	(649)		(650)
		(651)		(652) Y N		Y N	(653)		(654)
		(655)		(656) Y N		Y N	(657)		(658)
		(659)		(660) Y N		Y N	(661)		(662)
		(663)		(664) Y N		Y N	(665)		(666)
		(667)		(668) Y N		Y N	(669)		(670)
		(671)		(672) Y N		Y N	(673)		(674)
		(675)		(676) Y N		Y N	(677)		(678)
		(679)		(680) Y N		Y N	(681)		(682)
		(683)		(684) Y N		Y N	(685)		(686)
		(687)		(688) Y N		Y N	(689)		(690)
		(691)		(692) Y N		Y N	(693)		(694)
		(695)		(696) Y N		Y N	(697)		(698)
		(699)		(700) Y N		Y N	(701)		(702)
		(703)		(704) Y N		Y N	(705)		(706)

93. **When we last interviewed you, you mentioned** *(read names from item 99R on Information Sheet)* **as persons who will always know where you can be reached even if you moved away. Is this still true?** *(If so, verify the addresses and telephone numbers and enter below. If not, enter information about other persons who will know the respondent's whereabouts.)*

Name	Relationship to respondent	Address	Telephone number
(1)			
(2)			

Notes

1990

T6 91

INFORMATION SHEET
DATA FROM 1969 INTERVIEWS

94R. Whether Respondent was attending or enrolled in school in 1969

(507)
1 ☐ Yes
2 ☐ No
3 ☐ Armed Forces

Grade Respondent was attending OR highest year of regular school completed:

(508)
0 ☐ None 0
1 ☐ Elem. 1 2 3 4 5 6 7 8
2 ☐ High 1 2 3 4
3 ☐ College 1 2 3 4 5 6 7+

95R. Respondent's educational goal in 1969

(509)
☐ Not asked educational goal
☐ High 1 2 3 4
☐ College 2 4 6 7+

96R. Respondent's labor force status in 1969

(510)
1 ☐ Unable to work
2 ☐ Labor Force Group A
3 ☐ Labor Force Group B
4 ☐ Labor Force Group C
5 ☐ Labor Force Group C – Armed Forces

97R. Name of employer in 1969

_____

☐ Not employed in 1969

98R. Plans for age 30 in 1969

☐ Working – *Specify kind*

_____

_____

☐ Other or don't know

99R. Names and address of persons who will always know where respondent can be reached.

1. _____

_____

_____

2. _____

_____

_____

100R. Month of last interview